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ORIGINAL COMMUNICATIONS.

INTUBING THE LARYNX FOR ACUTE CATARRHAL LARYNGITIS. RECOVERY.

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[Read before the Chicago Medical Society, February 1, 1886.]

The patient, a delicate child, small for her age of two and one-half years, awoke on Saturday morning, January 17, with a slight cold. She was croupy all day. That night she had decided difficulty in breathing, which the mother relieved with home remedies, causing emesis.

The next morning she played about the house, seemed comparatively well, except that the brazen character of the cough was more pronounced. As evening approached she grew steadily worse. About 6 o'clock Dr. I. N. Danforth was called. He has since made the following note of her condition:

"When I arrived the dyspnœa was very great. With great effort the child could partially expand the lungs, the face was suffused, the eyes were dull, and the child's manner was listless and sleepy, as if partially narcotized. I advised surgical procedure at once."

The narrator saw the child about an hour afterward. Her condition then was as described above.

The diagnosis of acute catarrhal laryngitis was made.

As soon as the parents understood that there was to be no cutting, they readily consented to have the larynx intubed. This was quickly accomplished, tube No. 3 being safely introduced. The labored respiration immediately became natural, and the child passed into a quiet sleep, in which it remained for an hour.

The act of introducing the tube had caused such very free and copious expectoration of frothy, ropy mucus as to apparently, for the time being at least, have effectually cleared the parts of their obstruction. Thinking that the case might do well enough without the tube, and being accessible in case it should not, the tube was removed by drawing upon the thread which had been left hanging from the mouth. The child passed the night fairly well, though occasionally disturbed by the cough. The dyspnœa was present all the time, though not enough to cause much uneasiness to the parents, who had seen croup before.

By four o'clock in the afternoon the dyspnœa had increased to such an extent, in spite of free emesis, that the same tube was re-introduced, and the thread was left protruding from the mouth as before. Large quantities of mucus were again dislodged.

The severe symptoms were instantly relieved and the child slept quietly for two consecutive hours. During the night she was quite restless and uneasy. She did not sleep much, and drank water often, which always excited coughing, followed by free expectoration. Constant care of the nurse was required to prevent the child from removing the tube by pulling upon the thread. This accident did occur in the morning, about twelve hours after the introduction of the tube.

I saw her a short time afterwards. There was yet considerable difficulty both in inspiration and expiration, but still there was no immediate danger, so I concluded not to intube at at present. I left instructions to give an emetic dose of ipecac, should the symptoms require it. I stated that I would call again later in the day. I was summoned in great haste about four hours afterward. I found the little one much prostrated, laboring greatly for breath, with blue lips and clammy extremities. The parents thought we had better let the child alone, as they were sure it would die.

I tried to re-introduce the same tube that had been in position twice before. After several attempts, I was unable to do so, on account of the swelling that had taken place in the glottis. Tube No. 2, the next smaller size, passed in on the first attempt. Again there was free expectoration. In a few moments the thread was removed.

The change in the child was truly remarkable.

The urgent symptoms were relieved at once. From apparent imminent death she passed to a state of assured life. Quiet, refreshing, and undisturbed sleep followed.

During the next sixty-eight hours, which time the child continuously wore the tube, there was nothing of importance to notice, except an entire absence of those symptoms one would naturally expect from the presence of a foreign body in the larynx. During these three days, had any one of you seen the little patient (I am quite sure) you would not have suspected the presence of the tube, except by the absence of the voice.

There was, at times only, moderate coughing with free expectoration. Respiration was natural in every respect, she swallowed solid food readily; fluids not so easily, the latter generally produced slight coughing. Her sleep was compara-

tively undisturbed. She sat up a good share of the time playing with her toys.

At the end of the sixty-eight hours the tube was removed. From this time respiration was natural. She gained strength rapidly. In the course of a few days her voice had completely returned. Only a moderate amount of fever was present for the first three days. She had but very little medicine. I believe it was of no benefit to her.

Intubing the larynx is an operation, compared to tracheotomy, easily and quickly performed, a few moments of time only being required. It furnishes instant relief without cutting or bloodshed. It is believed to be nearly if not quite free from danger. The consent of parents can be readily obtained. The care of the patient, while wearing the tube, is nothing in comparison with a similar case after tracheotomy. The tube does not have to be removed or interfered with in any way to be cleaned. At least this was so in the case reported. The tube was perfectly free from mucus at the end of sixty-eight hours of continued use. This fortunate condition of affairs, in all probability, depends upon the uniform temperature in the larynx and the canula and inspired air.

The tubes that were first made were easily coughed up. The new ones are so constructed that this will not easily occur, and it did not happen with us. For these reasons I think intubing the larynx will commend itself to general favor, both with the profession and the people.

Removing the tube is much more difficult than introducing it. Could the thread be left attached to the tube and protruding from the mouth its extraction would be an easy matter. There are objections, however, to the presence of

the thread. It was observed that during the thirteen hours, while the child wore the tube with the thread attached, she had much difficulty in swallowing, particularly fluids; and she coughed more in proportion than during the three days subsequently, when she wore the tube without the thread.

In other words, the thread seemed to produce the principal part of the irritation. There may be good reasons for this. When the thread is passed through the hole made for it in the tube, at its junction with the anterior part of the collar, and the ends are drawn out of the mouth, it draws across the base of the epiglottis, and so interferes with its accurate mechanical work in closing the glottis. It has seemed to me that if the thread were attached to the posterior part of the collar, on the right side, it would be further removed from the base of the epiglottis and might remedy the evil. I intend to give the idea a trial at the first opportunity I may have. Another objection to wearing the thread, even if it produced no irritation, is that it requires constant watching to prevent the child from pulling the tube out.

On the other hand, one can imagine a piece of false membrane dislodged from the trachea below, and driven against or into the lower end of the tube in such a way as to entirely obstruct respiration. In such a state of affairs the presence of the thread would in all probability be the means of saving that child's life, by quickly removing the tube. It is a matter of some interest then that if the thread is to be left in position it produce the least amount of irritation.

The instruments used and here exhibited are those devised by Dr. O'Dwyer.

The set, complete, consists of five tubes with obturators, an introducing instrument, an extracting one, a gag, and a

scale which indicates the tube to be used at a given age. The tubes vary in length from one and one-half to two and one-half inches, suitable for cases from a few months to ten years of age. They are quite heavy, flattened from side to side, plated with gold, having a collar at one end to prevent slipping through the glottis, and a large bulge a little above the middle, that passes below the vocal cords and so prevents its easy expectoration. The tube in the larynx interferes to a surprisingly small degree with the functions of the epiglottis. By means of the thread attached to the tube, the operator removes it easily from the œsophagus or larynx. The obturator, slipped into the threaded tube, is screwed to the introducing instrument. By means of a simple device the obturator is removed when the tube is in position. The extracting instrument has a jointed point that fits loosely into the upper end of the tube, and is made to expand, when the tube can be easily removed.

The gag is the only part of the apparatus that will not work well. It does not expand enough; is easily crowded out by the tongue; though the jaws are lined with lead, it would be very harsh for a baby without teeth. After covering the mouth-pieces with disks of rubber it was found to be very efficient.

Caution is required on the part of the operator that the index finger shall not be wounded by the teeth, since there might be danger of inoculation, in diphtheria.

In the case here reported, to intube the larynx the child was seated on the lap of an assistant, facing the operator; another assistant held the child's head, bending its neck well back. The gag was placed in the left angle of the mouth; the index finger of the left hand held the epiglottis forward

and at the same time guided the threaded tube into the larynx. The obturator and gag were at once removed. In a few moments the gag was re-introduced, the index finger placed on the collar of the tube and the thread removed.

To remove the tube, the child was placed in the same position as on introducing it. The point of the extracting instrument was guided by the finger into the orifice of the tube. This was the most difficult part of the whole procedure. No anæsthetic was given.

533 West Monroe Street.

A COMPLICATED LABOUR. By DR. JOHN D. SKEER.

[Read before the Chicago Pathological Society, February 8th, 1886.]

Mrs. H., æt. 27, American, primipara. Labour began at one A. M. on September 1st, 1885, and at seven A. M. her family physician, Dr. E. Wyllys Andrews, was sent for. On arriving he found the os uteri slightly dilated, but could, however, make out a vertex presentation. Labour progressed from that time naturally, but slowly, until 3:15 P. M. of the same day, at which time a living, well-formed child was born. Immediately Doctor Andrews discovered the presence of a second child in the cavity of the uterus. The pains had ceased, and after waiting a half-hour, a small dose of the fluid extract of ergot was administered, which was repeated at the end of an hour. These methods failed to excite the slightest uterine contractions. At 5:30 P. M. I was called in consultation.

We found it very difficult to make out the presentation, which proved to be the tuberosity of the right ischium, occupying the middle of the superior strait. The child's pelvis was tipped toward the mother's left side. An undetached

placenta occupied the left iliac fossa, extending nearly to the os uteri.

As there was no hæmorrhage, we waited an hour and gave more ergot, but the pains continued to be irregular and inefficient, and we decided to bring down the feet and deliver at once. On introducing the hand, but one foot and one arm could be felt, the latter inclined to fall down in the plevis. In the position that should have been occupied by the left leg and arm a large fleshy mass could be felt without any definite outline. The right leg was brought down with the toes to the front, and traction was made without causing the slightest change in the position of the child—it was firmly fixed, and held as though in a vise. Strong, unremitting traction for about half an hour, at the same time rotating the child toward the mother's left side, brought the child's pelvis through the vulva with the heel to the front. The child was then delivered as in ordinary breech presentations, and was found to be well developed, dead, and not a monstrosity as was at first supposed.

As the placentæ were not expelled within an hour, the cords were traced upward; one led to the lower placenta, the other was traced upward through a small opening beyond our reach. We then realized for the first time that we had an hour-glass contraction of the uterus, which had taken place after the delivery of the first child. With careful bi-manual palpation the constriction was overcome, and the upper afterbirth removed. It was adherent throughout its entire extent. Immediately after the removal of the upper placenta the lower one became detached, and was readily brought away. The placentæ were united by a strong fibrous band about six inches in width. The patient made a good recovery, and nothing occurred in the after-treatment worthy of note.

Conclusions: Regarding the position of the second child, we had, below the constriction, the body, the right arm and leg, and, as it proved, the left thigh and leg. For on no other hypothesis can we account for the oblique position of the pelvis, unless the foot were grasped and held in the upper chamber by the contraction. The left thigh and leg were behind and completely covered by the membranous band uniting the placentæ, so that their position could not be determined. Rotating the child towards the mother's left slipped the left thigh and leg from behind the band, without detaching the after-birth. Had this latter accident happened hæmorrhage would have been a serious, if not fatal, complication.

681 Washington Boulevard.

A CASE OF ACUTE ALBUMINURIA. *By* C. H. H. HALL, P. A., *Surgeon U. S. Navy.*

[Read before the Naval Medical Society.]

The following case occurred on board the U. S. S. Ranger, while *en route* from the west coast of Mexico to San Francisco. As it is read solely to introduce an exchange of experience upon an important point in therapeutics, viz., the use of opium in albuminuria, the paper is merely an outline history of the case.

J. M., second-class fireman, age 41, native of Java, while returning from liberty on shore, and partially intoxicated, fell from the wharf, at San Diego, California, into the bay. He remained clinging to a pile, and exposed to a chill wind, for nearly an hour before his rescue by a boat from the ship. When brought on board he was considerably fatigued and

thoroughly chilled, but sober. His clothing was changed at once, and he was put into a hammock.

Next morning he appeared at sick-call, complaining of pain in the left hip, which had been bruised in falling. He had also a feverish air, and slight rise of temperature, 100.2° F. under the tongue.

Injected morphia grain ¼ near the bruise, and directed patient to remain in his hammock. At 5 P. M. temperature was 99.2° F. On the 2nd day the morning temperature was 101.6° F.; at 5 P.M. 104.2° F. He had a marked chill at 2 P. M., without complaint of local distress. Examination of the chest discovered nothing wrong. As he had recently recovered from malarial fever, the exposure was suspected to have induced a recurrence of it. He received quinine.

On the 3rd day he had one thin stool during the night; the morning temperature was 104.4° F.; he had nausea, thirst and dry, hot skin; there was no abdominal tenderness. At midday the temperature was 104.6° F., and the patient was vomiting. The urine was slightly albuminous; specific gravity was 1.019, acid, dark-colored. Fluid extract of jaborandi ℥i. caused profuse sweating, with fall of temperature to 102.2° F. at 3 P.M., and 102° F. at 5 P.M. By 8 P.M., however, the temperature had risen to 103.4° F., and the patient was vomiting again. These symptoms of suspected remittent fever were not accompanied by the usually concomitant browache. But neither this fact nor the presence of albumen in the urine, which had been lately observed in otherwise ordinary cases, was remarked as significant of error in diagnosis. The vomiting was checked by hypodermic injection of morphine over the stomach, and later quinine was resumed. On the 4th day the morning temperature was 102.6° F.; at 2 P.M., 101.8° F.; the urine passed at this time was dark colored, turbid, of specific gravity of 1.025,

and slightly albuminous. An inferior microscope revealed no casts. Quinine was continued to considerable cinchonism, and slight nausea by evening-time. The urine having become scanty, a diuretic mixture of digitalis, acetate of ammonium and acetate of potash was ordered. Later, when gastric irritability threatened, a suspension of stomach medication was ordered, and morphia gr. ¼ was injected, hypodermically, with satisfactory result. The bowels were moved normally. On the 5th day the morning temperature was 103.2° F., and the evening, 103° F. Late in the afternoon the patient complained of a "stitch" near the right nipple. Auscultation revealed over the right mammary region a rubbing sound with respiratory movements. There were no other chest signs, and the respirations were tranquil. Injected morphine, gr. ⅓, near the nipple, after which there was no recurrence of the pain. He had 36 grains of quinine during the day, and the diuretic mixture was continued. On the 6th day the morning temperature was 102.2° F. There was no stool for two days. A simple enema was, shortly after its administration, voided without the patient's consciousness. One hour later he passed, normally, a thin, light-yellow, stool. The urine at the same was rather turbid, dark-colored, acid; specific gravity 1.020, and slightly albuminous. Muttering delirium came on during the middle of the day, and the temperature rose to 104° F. Jaborandi and wet-pack brought it down to 102.4° F., and put the patient to tranquil sleep. Within eight hours after using the wet-pack he passed two thin stools and a large quantity of urine. The evening temperature was 104° F. Quinine. On the 7th day the morning temperature was 102.8° F. The patient was restless and irritable. About 1 P.M., the temperature being 101.4° F., he suddenly became maniacal, requiring considerable force to keep him in the cot. Injected hypodermi-

cally grain ⅓ of morphine. He became tranquil and rational at once, and a half hour later, after saying he felt much better, he fell into quiet sleep. As nothing in his condition indicated other than easy slumber, he was not disturbed until 6 P.M., but he was then found to be comatose, could not be aroused, and the reflex sensibility of the conjunctivæ was slight. Note the following: pulse 90, full and rather strong, not irregular; respirations 23½, of fair character, except slightly hissing stertor; temperature in axilla 100.4° F. (buccal temperature at same time yesterday was 104.° F.); skin warm, dry, and, if at all changed, rather pale; pupils small, immobile, and unequal, the left being the larger; conjunctivæ scarcely sensitive. A catheter, introduced to determine whether the kidneys were acting, brought away but a few drops of turbid, highly albuminous urine. Counter-irritation failing to arouse him by 7:30 P.M., atropine, grain $\frac{1}{20}$, was injected, hypodermically. At this time the axillary temperature was 100.6° F., respiration 23½, pulse 90. Liquids put into the open mouth were swallowed tardily, and by reflex action only; the bowels were evacuated into the bed, the conjunctivæ were quite insensitive, tracheal *râles* were present, the extremities were cool, and there was general muscular relaxation. As the pupils showed no effect of atropine at 8 P. M., *i. e.*, one half-hour after its administration, the drug was repeated in half the quantity, grain $\frac{1}{40}$. The pupils began very soon to dilate.

At 9 P. M. the respirations were 24, full and vigorous, pulse 120, of good strength but less volume, axillary temperature 101.8° F., and pupils much dilated. A catheter brought away one ounce of turbid urine with one-fourth albumen. Jaborandi, put into the mouth, was tardily swallowed with a start and a moan. Auscultation of the chest

discovered dry rubbing sounds in the left lower axillary region. Applied dry cups over the kidneys. 9:30 P. M., axillary temperature was 102.6° F., respiration 24, extremities warm, light brow-sweat from the jaborandi, ℥ss. Gave him the diuretic mixture previously mentioned. 11:30 P. M., axillary temperature 103.8° F., respiration 31, pulse 120, skin hot and dry. Patient opened his eyes when his name was called, and swallowed the diuretic, though with some difficulty, which was attributed to the action of the atropine upon the pharynx. At midnight drew off by catheter fifteen ounces of urine, turbid, acid, specific gravity 1.020, moderately (about one-sixth) albuminous. The patient now steadily improved to complete consciousness at 4 A. M., at which time the respirations were 36, pulse 120, axillary temperature 103.4° F., skin warm but dry, and kidneys active, fourteen ounces more of urine having been drawn off at 2 A. M. The diuretic was continued each two hours. 8th to 10th days. Patient visibly improved, though the temperature continued but little abated (101°–103° F.). The albumen in the urine diminished to a haze, the kidneys were active, the bowels easy, and gastric irritability absent. The pulse remained rapid, 102–111, and respirations frequent but easy. The microscope discovered in the urine, immediately after its evacuation, many minute oil globules and a large number of pellucid globular bodies, whose nature was not determined. The diuretic was continued on the 11th day. The morning temperature in mouth was 100° F., pulse 92. The patient was cheerful, took food with relish, and had no disturbing symptom. The urine was passed in good quantity, hazy only with albumen, clear, acid, specific gravity 1.019, and the patient was apparently on the verge of convales-

cence. But on account of unavoidable exposure to varying temperature in the sick-bay, it was thought best to transfer him to a hospital. Accordingly he was warmly wrapped in blankets, placed in a tented cot, which was enclosed on all sides from possible drafts, transferred to a closed ambulance wagon on the navy yard dock and sent to the naval hospital, Mare Island, about one mile distant. These precautions against chill were taken, notwithstanding his reiterated request to be allowed to walk to the wagon and thus show how much better he was. Three days after his admission to hospital he died in high fever. No necropsy.

Remarks.—Three points in this case deserve special notice:

1. The differential diagnosis of the coma.

2. The action of the drugs, jaborandi and atropine.

3. The agency of the morphine in the occurrence of the supression of urine.

1. Was the coma due to narcosis, to uræmia, or to both? These were the symptoms: slight hissing stertor, respirations 23½, pulse 90 and substantially normal, temperature (axilla) 100.4° F., one degree less than immediately before and after the attack, face rather pale than flushed. These are not characteristic of opium narcosis. To them add the actual presence of uræmic delirium before the drug was given. As to the state of the pupils, moderately contracted and unequal, it is enough to say that authorities differ upon the state of the pupils in uræmia, when the symptom is mentioned at all. I do not think the morphine had more than a secondary agency in the causation of the coma.

2. Of the drugs, I wish to note merely the considerable fall of temperature that followed the administration of

the jaborandi, and the speedy rise, the short duration of this effect being an objection to the use of the drug as a febrifuge.

I have seen but little mention of the use of atropine in connection with the therapeutics of anuria, although Harley wrote, in 1869, ("The Old Vegetable Neurotics," p. 213), "Belladonna indeed is, in the truest sense of the word, a diuretic, and more powerful perhaps than any other that we possess." Its action upon the bladder, obtunding its sensibility, may be an objection to its common use as a diuretic, but this objection loses force in the presence of suppression of urine, and of a physician with a catheter to anticipate retention. In the case related above, I think atropine was the agent of relief, and not by antagonizing the effect upon the central nervous system of a third of a grain of morphine, but by its specific action upon the kidneys.

3. It is not long ago since a question about the use of opium in albuminuria would have received but one answer, enjoining the greatest caution against the hazard of it. In 1875, however, Professor Loomis, of New York ("Lectures on Diseases of the Respiratory Organs, Heart and Kidneys," p. 450), challenged the believers in this therapeutic maxim, saying, "In 1868," etc., and in his "Text-book of Practical Medicine," lately published, this opinion in favor of the use of opium in uræmia is declared with emphasis. This declaration has led the profession to re-examine the question, and results of this study sustain Professor Loomis' opinion.

WASHINGTON, D. C., 11 February, 1886.

QUINSY AS A RHEUMATISM.

By J. SUYDAM KNOX, A. M., M. D., *Adjunct Professor of Obstetrics and Diseases of Children in Rush Medical College.*

[Read before the Chicago Medical Society, on February 1st, 1886.]

Quinsy, an acute tonsilitis, is an inflammation of the parenchyma of one or both tonsils, with their mucous coverings, glandular apparatus, and surrounding connective-tissue. It generally ends in suppuration.

Its immediate cause is invariably exposure to wet or cold.

The prominent symptoms are: a sudden onset, a high temperature (102° to 104° F.), great soreness and stiffness of the parts inflamed, exquisite tenderness on motion (such as swallowing), and great swelling and œdema of the contiguous parts.

Niemeyer, Ziemssen, Aitkins, Bosworth, Flint, Loomis, Bristow, and Bartholow all state that there is a hereditary predisposition to quinsey, and a tendency in those affected to recurrent attacks. Morell Mackenzie and E. Fletcher Ingals, in addition, state that rheumatic individuals are most liable to the disease.

The treatment most approved of by these writers may be thus summed up:

Arterial sedatives, as aconite, veratrum viride and antimony; saline cathartics; warm fomentations externally; and astringent gargles, usually with chlorate of potassa.

Empirically, quinine and cimicifuga internally and guiacum and sodium bicarbonate locally have been used with varied success.

Treatment, however, thus far has been a dismal failure. Trousseau in his inimitable way, thus expresses it:

"Inflammatory sore-throat is one of the diseases which are

at once the glory and reproach of all kinds of medical treatment—the reproach, because medicine never prevails against them; and the glory, because they terminate in spontaneous recovery, whatever we do."

I hope in the following pages to prove that acute tonsilitis, in a vast majority of cases, is most likely a rheumatic inflammation, and that, so considered, its treatment is simple, efficient and brilliant.

Four years ago I was called to see a gentleman sick with acute articular rheumatism. While rendering him professional services, his mother, who in the capacity of nurse had been much exposed, was suddenly attacked with quinsy. Without apparent benefit I gave her a saline cathartic. Also, hourly, minim doses of tincture of aconite root, and ten-grain doses of sulphate of quinine every six hours.

Forty-eight hours after the commencement of her illness inflammatory rheumatism seized her. The medicine was changed to eight-grain doses of salicylate of soda hourly. To our mutual surprise, the quinsy disappeared like magic. I was much impressed at the time by the apparent relationship of quinsy and rheumatism, and the prompt relief of the former through anti-rheumatic remedies. Later inquiries developed the facts that a second son was subject to both quinsy and rheumatism, and a daughter to repeated attacks of quinsy, and a son of this daughter to rheumatism.

Since then I have treated forty-nine cases of acute tonsilitis, —making fifty in all.

In each case careful inquiry was made as to rheumatic history, and in 45 cases, or 90 per centum, rheumatism was hereditary in the family. Five cases (ten per centum) had no rheumatic history whatever.

All fifty cases were treated at first with salicylate of soda

and aconite, and hot alkaline gargles or the insufflation of bicarbonate of soda.

Forty cases (80 per centum), all rheumatic, recovered under this treatment in from 36 to 72 hours, without suppuration. In some, the effect of the medication was almost immediate. In all, the soreness and exquisite tenderness on swallowing disappeared before the lowered temperature and diminished swelling warranted a cure.

In five cases, positively rheumatic, no benefit accrued from treatment, and all ended in suppuration in from five to eighteen days.

In five cases, positively not rheumatic, quinine was substituted for the salicylate of soda, on account of its failure to relieve. No benefit accrued, and four of the five terminated in suppuration.

Admitting the impropriety of basing definite conclusions upon so small a number of cases, the results are still too startling and positive to be due either to chance or bias, and surely merit further investigation.

Considering for a moment the etiology and symptoms of quinsy, one is impressed by the close resemblance to rheumatism.

The heredity; the proneness to repeated attacks; the immediate cause in exposure to wet and cold; the sudden onset; the high temperature, out of all proportion to the amount of inflammation; the stiffness, and exquisite tenderness on motion, —surely these are familiar features of the graver disease.

Reviewing now the cases briefly reported, one cannot fail to notice the close association of acute tonsilitis with rheumatism. Forty-five out of the fifty, or ninety per centum, possessed a rheumatic diathesis. Since Morell Mackenzie and E. Fletcher Ingals, gentlemen of large experience in throat-affections, call

attention to the same fact, it may fairly be assumed that this percentage would be maintained in a larger aggregation of cases.

I take it, that the only logical inference to be drawn is, that the diathesis creates the susceptibility to, and shapes the course of, the disease. Grant this, and quinsy becomes a rheumatic inflammation, and should be treated accordingly.

A second prominent fact in the report of cases is the prompt amelioration of symptoms under anti-rheumatic treatment. This result was so unvarying as to force the conclusion that it was accomplished solely by the remedies used.

Several patients, made wise by experience, commenced using the salicylate of soda and hot gargles as soon as an attack of quinsy threatened, and with unvarying success in aborting the illness. Still further proving the remedial value of anti-rheumatic treatment.

Negative testimony in the same direction is found in the failure of the treatment of the five cases not rheumatic. There are undoubtedly cases of acute tonsilitis which are not due to diathesis, and which specific treatment will not benefit. Such apparently are the five cases reported. The failure of anti-rheumatic medication with these five, brings out more vividly its efficacy with the forty-five.

Were I to formulate anything based on this paper it would be as follows:

1. Acute tonsilitis is generally a rheumatic inflammation.

2. Eighty per centum of such cases can be promptly cured with anti-rheumatic remedies.

3. Acute tonsilitis, not rheumatic, is not yet amenable to treatment.

The following selected cases will illustrate the above propositions:

CASE 1.—Mr. D., retail butcher, aged thirty. For three years he has had attacks of quinsy about every three months. Has had two attacks of acute articular rheumatism, and is of rheumatic family. I was called to see him in March, 1884. He had then been suffering from quinsy nearly twenty-four hours. The tonsils were both immensely swollen, deglutition was very painful, and there was constant expectoration of glairy, ropy mucus from the throat. I administered one minim tr. aconite root and eight grains salicylate of soda each hour, and with an insufflator applied bicarbonate of soda freely to the tonsils. Insufflation was to be practiced each hour, and the soda to be gargled off, a few minutes after, with hot water. Relief was not experienced until evening, about twelve hours, when he ate a fair supper. In forty-eight hours he was at work. He told me it was the first time he had escaped a ten days' illness with suppuration of the tonsils.

CASE 2.—Mrs. W., aged forty-two. Subject to rheumatic neuralgia. Her grandfather and her father died from rheumatic sequelæ. Her only brother now an invalid from valvular heart-disease and rheumatic gout. First attack of quinsy in February, 1883. She was treated by another practitioner. Suppuration and natural cure in five days. Second attack, January 2nd, 1885. Treatment—insufflation of sodii bicarb., hot gargles and hourly doses of sodium salicylate. Relief was immediate. I was notified that a second visit was unnecessary. Third attack in April, 1885. She aborted the disease with the same remedies, without my services.

CASE 3.—Mrs. P., aged twenty-nine. Subject to rheumatism and quinsy for years; whole maternal family rheumatic. Attacked with quinsy January 1st, 1884. I saw her in twenty-four hours. Administered hourly eight-grain doses of salicylate of soda. On account of her inability to open her mouth, hot carbolized lime-water gargles were used instead of insufflation

of soda. Recovery occurred in thirty-six hours, without suppuration. She has aborted repeated attacks since then by the same treatment.

Such prompt results, as in these three cases, can only be due to specific treatment.

CASE 4.—Maud P., aged twenty-two. Father's family rheumatic, but she never had rheumatism herself. She has been subject to quinsy for years. Has usually had three or four seizures annually. She was treated by me for quinsy in April, 1884, with salicylate of soda and hot alkaline gargles. Relief came in three days, without suppuration. Since then she has had no attack; each threat of the disease being successfully met by the above remedies.

This result is significant. No attack of quinsy has occurred in nearly two years, as a result of specific treatment, whereas there had previously been a seizure about every three months.

CASE 5.—Nellie M., aged thirty-five. Herself, one sister and father subject to rheumatism. In July, 1883, I was called to treat her for quinsy. Anti-rheumatic treatment as detailed above was faithfully tried for eleven days, when suppuration brought relief. The only effect of the treatment, apparently, was to prolong the suffering and retard suppuration.

CASE 6.—Edw. S., aged twenty-four. No rheumatic history whatever. I was called to treat him for acute double tonsilitis, in September, 1885. Anti-rheumatic treatment was used for thirty-six hours with no benefit, and with much distress from ringing in his ears, and nausea. I substituted quinine, ten grains, and bromide of sodium, 40 grains, in milk, each six hours. Also a gargle of lime-water, carbolic acid (1 per centum) and morphia. Two days following, hot poultices to neck. The acute symptoms were alleviated, but the disease steadily progressed and terminated in suppuration on the eighth day.

14 Loomis street.

INTUBATION OF THE LARYNX, WITH HISTORY OF CASES.

By F. E. WAXHAM, M. D., *Professor of Diseases of Children, College of Physicians and Surgeons of Chicago.*

[Inaugural Thesis read before the Gynæcological Society of Chicago, January 15th, 1886.]

In the *Medical Record* of Feb. 21st, 1885, there appeared a brief article, by E. F. Brush, M. D., on the subject of intubation, in which he referred to two or three cases of croup treated in this manner by Dr. J. O'Dwyer, of New York. Being disheartened with tracheotomy, I rejoiced at this new departure. Although intubation of the larynx had previously been attempted in France, it was entirely abandoned, and to Dr. O'Dwyer belongs the great credit of reviving this operation, and so modifying it as to make it a practical and successful procedure. The recent literature on this subject is somewhat meager. In addition to the above reference, articles of more or less value have appeared, referring to it, in the *New York Medical Journal*, of Aug. 8th, 1885; the CHICAGO MEDICAL JOURNAL AND EXAMINER, of June, 1885, of November, 1885, and the *Archives of Pediatrics*, of November, 1885.

In the *New York Medical Journal*, of Aug. 8th, will be found a most interesting article on the subject by Dr. O'Dwyer, who gives a history of his investigations, extending over a period of several years, and of the various changes made in the instruments, and also illustrations of the same.

Intubation possesses many advantages over tracheotomy.

1. No opposition is met with on the part of parents and friends; quite a contrast to the difficulty with which we usually meet in obtaining the consent to tracheotomy.

2. It relieves the urgent dyspnœa as promptly and as effectually as tracheotomy, and if the child dies there is no regret that the operation was performed, and no discredit attached to the physician.

3. There is less irritation from the laryngeal tube than from the tracheal canula. As the tube is considerably smaller than the trachea, it does not press upon it firmly at any portion, excepting at the chink of the glottis.

4. Expectoration occurs more readily than through the tracheal tube.

5. As the tube terminates in the throat, the air that enters the lungs is warm and moist from its course through the upper air-passages, and there is less danger of pneumonia.

6. It is a bloodless operation.

7. It is more quickly performed, and with less danger.

8. There is no open wound that may be the source of constitutional infection.

9. Convalescence is more rapid, as there is no ghastly wound to heal by slow granulations.

10. The patient does not require the unremitting care of the physician, as in tracheotomy.

11. I believe it to be a more successful method of treating croup, either diphtheritic or membranous, than tracheotomy.

The only objection to the operation of intubation is the difficulty of performing it. This objection can be overcome by continued practice upon the cadaver. While the inexperienced will have great difficulty in entering the larynx, and will almost invariably pass into the œsophagus, yet, with sufficient practice upon the dead body, the operation may be performed quickly, easily and safely; indeed, one trial and ten seconds should be all that we should ask for. The

operation of removing the tube is even more difficult than its introduction, and calls for the greatest skill and caution. In only three cases, however, have I met with difficulty. In one case the tube, which was one of the primitive ones, slipped into the trachea, but was removed, under ether, at the first attempt. In another case the child was but twenty months of age, and the tube was held so closely and tightly that it was removed with difficulty, and ether was given in this case. In another case the child was so nearly dead that no gagging occurred, and consequently the head of the tube did not rise from the vocal cords, and removal was difficult, although accomplished without ether. With these three exceptions, the tube was extracted quickly and without difficulty. These objections, although serious, and objections that will necessarily confine the operation to the hands of the most expert, are the only ones that have appeared in an experience of fourteen cases coming under my care. In regard to the comparative value of tracheotomy and intubation, we would say that as yet we have not sufficient data, but the outlook for the new operation is most encouraging, so much so that I shall never again, I am fully convinced, perform tracheotomy for membranous or diphtheritic croup. Dr. O'Dwyer, in perfecting and modifying these instruments for intubation of the larynx, has accomplished one of the greatest triumphs of modern surgery. I would beg leave to submit a report of the following cases coming under my observation. It has been my pleasure to perform this operation seventeen times, upon little patients who in every instance were in imminent danger of suffocation from either diphtheritic or membranous laryngitis. Of this number, eight have made perfect and complete recoveries. The ages va-

ried from 16 months to 5 years. Six cases were 3 years or under, and seven cases were diphtheritics—two conditions under which tracheotomy is rarely successful. The ages of the successful cases were 5 years, 20 months, 2 years and 2 months, 5 years, 5 years, 3 years, 4 years, and 5 years, respectively. All were in imminent danger of suffocation, and in five cases tracheotomy had been proposed but declined. This is certainly a grand record for the new operation. Two questions will naturally arise in considering these statistics. First, were the cases as serious as represented? and, second, might not these cases have recovered without the operation? In answer to these queries, it may be said that in every case muco-pus and shreds of false membrane were rejected, showing that they were all cases of diphtheritic or membranous laryngitis; and, second, all, with two or three exceptions, were seen by other physicians, who invariably predicted a fatal termination, unless relieved by surgical measures. It is unnecessary to refer to the unsuccessful cases, for it may be taken for granted that they were serious ones. Of the successful cases, patient No. IV. was attended by Dr. Behrend, who sent for me to perform tracheotomy, but intubation was substituted. Dr. Behrend, as well as myself, was fully convinced that the child must soon have died without surgical aid. This patient was subsequently seen by Dr. H. T. Byford.

Case VI. was seen in consultation with Drs. Dahlberg and Appleby; both physicians were positive that danger was imminent, and that the patient must die within a few hours. Dr. Helm also witnessed the operation, and can testify to the critical condition of the patient.

Case VIII. was attended by Dr. Kossakowski, who ex-

pressed the opinion that the only hope was in an operation. The patient was also seen by Dr. Sullivan on one occasion, when it became necessary to reintroduce the tube; and on still another similar occasion by Dr. D. S. Clark, of Rockford.

Case XI. was attended by Dr. Valin, who stated that it was an impossibility for the child to live until morning without an operation,

Case XIII. was pronounced utterly hopeless by both Dr. C. E. Caldwell and Dr. Ogden.

Case XIV. was in the most critical condition, and Professor Quine stated that "any rational physician would positively have said that the child could not have lived longer than two or three hours."

I regret very much that I have no corroborative evidence in Case XVI., but I was fully convinced that there was not the least hope of recovery.

The most brilliant statistics of tracheotomy have been presented by Ranke, of Munich, who presents a series of cases, a trifle more than one-half of which recovered. Ranke recommends the early operation, and confesses that he has operated upon some cases that would have recovered without it. When we consider his statistics in the proper light they do not seem so brilliant, and correspond more nearly to our own statistics of tracheotomy. It must be remembered that by the most prompt and judicious treatment we will save one-third of our patients by medical measures, even if tracheotomy is abandoned. We may, therefore, consider that Ranke, in operating early—"as soon as the vocal and respiratory symptoms of laryngeal invasion become manifest"—operated upon one-third of his patients unnecessarily, as that proportion might have recovered without it. Sub-

tracting one-third the number unnecessarily operated upon from one-half the number saved, and the result, one-sixth, will represent the true proportion saved. Not only this, but again, by operating early we shall operate upon a certain proportion of cases of severe spasmodic laryngitis. Often it is only by watching a case carefully from day to day that we are able to make a positive diagnosis. By operating upon these cases we will save every one of them; but ninety-nine out of every hundred would recover without the operation. It is an interesting fact that all of our most successful and brilliant tracheotomists advise the early operation.

The first five cases were reported in the CHICAGO MEDICAL JOURNAL AND EXAMINER of November, 1885.

CASE VI.—I was called November 3d to see an infant of twenty months, suffering from membranous laryngitis. From Dr. Dahlberg, the attending physician, I obtained the following history:

He was taken sick on October 29th, with slight fever, vomiting, soreness of the throat, and an occasional cough, indifference for food, but great thirst. The parents, thinking that he had taken a slight cold, gave him castor oil and hive syrup, etc., until October 31st, when Dr. Dahlberg first saw him. He found marked fever, temperature 102½° F., pulse 140; respiration accelerated, slight cough, and hoarseness of the voice. Expectoration scanty and tenacious in character. On examining the throat the mucous membrane of the fauces and tonsils were very much inflamed, and the sub-maxillary glands enlarged, but no membranous exudate could be detected. The mother, however, informed him that she had observed two white spots in the throat the day before. He diagnosed pseudo-membranous croup, and gave a mixture of quinine and tannic acid in simple syrup every three hours, alternating with

a solution of chlorate of potash, tincture of iron and glycerine and a spray from an atomizer of lime water and carbolic acid.

November 1st, 9 A. M.—Temperature 101° F., pulse 140, respiration 38. Very little change. Fever less, otherwise no improvement. The hoarseness and cough more marked, and slight dyspnœa.

To facilitate the removal of muco-pus and shreds of false membrane from the throat and bronchi, he gave an expectorant mixture of muriate of ammonia, syrup of ipecacuanha and syrup of wild cherry bark, and during the night an emetic of sulphate of copper, and also every four or five hours the inhalation of slacking lime.

November 3d, 9 A. M.—Temperature 100° F., pulse 145, respiration 46. The pulse more frequent and weak; indeed, all the symptoms growing worse. Cough very much suppressed and hoarse, respiration greatly impeded, great dyspnœa, marked abdominal breathing and dilatation of alæ nasi. While in this condition I was called to perform intubation. It was evident that the child could live but a few hours unless relieved by surgical interference. Assisted by Drs. Dahlberg, Appleby and Helm, the laryngeal tube was quickly and easily introduced, requiring but a few seconds. The bridle securing the tube was removed and the result was magical, so far as the breathing was concerned, relieving the intense dyspnœa at once. After a few minutes he seemed to suffer but slightly, and in less than half an hour was sleeping quietly. At 5 o'clock the child awoke and called for food and water, and seemed to feel quite well. Temperature 100° F., pulse 140, respiration 36.

November 4th, 9 A. M.—Temperature 100½° F., pulse 136, respiration 36. 2 P. M.—Temperature, 101° F., pulse 140, respiration 36.

November 5th—Child has been sleeping nearly all night, and the appetite seems good. 9 A. M.—Temperature 100½° F., pulse 132, respiration 36. 8 P. M.—Temperature 99½, pulse 130, respiration 36. Cough seems more soft, but the respiration seems more noisy. One grain of quinine was given every three hours.

November 6th, 9 A. M.—Temperature, 99½° F., pulse 130, respiration 34. Breathing much easier and discharges considerable mucus by coughing. Slept from 10 P. M. until 3 A. M., when he awoke, called for food, and slept again until 8 A. M. 8 P. M.—Temperature 99¾° F., pulse 130, respiration 36.

November 7th, 9 A. M.—Temperature 99½° F., pulse 130, respiration 36. Has slept all night, and is breathing easily. At 2 P. M. three careful attempts were made to remove the tube, but being unsuccessful ether was given and no difficulty was experienced. The breathing for the following two hours was slightly impeded, with frequent coughing, discharging mucus and shreds of false membrane.

8 P. M.—Temperature 99½° F., pulse 134, respiration 36. Breathing easy and quite as good as with the tube. Quinine continued.

November 8th, 9 A. M.—Temperature 100° F., pulse 120, respiration 36. Has slept nearly all night. Awoke twice and inquired for food and drink.

8 P. M.—Temperature 98¾° F., pulse 120, respiration 36. Breathing not quite so easy, and less discharge of mucus in coughing. Appetite fair. Ordered an expectorant cough mixture.

November 9th, 9 A. M.—Temperature 99° F., pulse 130, respiration 40. Respiration more hurried and obstructed, indicating a proliferation of membrane.

8 P. M.—Temperature 100° F., pulse 130, respiration 42.

Breathing becoming laborious and noisy. Child very fretful. No appetite. Applied flaxseed poultice to chest and back. Gave enemas of warm milk and brandy every three hours.

November 10th, 9 A. M.—Temperature 100¾° F., pulse 130, respiration 46. Breathing laborious and exhausting. Voice and cough again becoming suppressed.

At 10 P. M. the tube was re-introduced without difficulty, when immediately the respiration became easy, and the child, after coughing up some mucus and shreds of membrane, slept quietly.

8 P. M.—Child sleeping. Temperature 99½° F., pulse 120, respiration 36.

November 11th, 9 A. M.—Temperature 99° F., pulse 120, respiration 36. Child slept well all night. Drank a cup of milk, a little beef tea and brandy; not so fretful.

8 P. M.—Temperature 101½° F., pulse 136, respiration 40. Child weaker and more feverish. Very little appetite. Continued enemata of milk and brandy every three hours.

November 12th, 9 A. M.—Temperature 98½° F., pulse 120, respiration 36. Breathing easy; little cough; appetite poor. Continued milk, quinine and brandy.

12 M.—Tube was again removed without difficulty. Coughed for a short time, expectorating mucus and shreds of false membrane.

8 P. M.—Temperature 99½° F., pulse 130, respiration 40. Has only slept one hour during the day, is very fretful, and will take but little food. Gave milk enemata with brandy every three hours, and port wine and water for drink.

November 13th, 9 A. M.—Temperature 99½° F., pulse 130, respiration 40. Slept well all night; breathing is easy, but the child very weak. Milk and brandy enemata continued.

8 P. M.—Temperature 98° F., pulse 120, respiration 36. Has

slept six hours during the day. Drank a pint of milk and some chicken broth. Is better, but complains of soreness of the throat; voice hoarse.

November 14th, 9 A. M.—Temperature 98° F., pulse 120, respiration 34. Appetite better and interested in play.

8 P. M.—Temperature 98½° F., pulse 120, respiration 34. Sleeps well and takes food better. Voice still hoarse.

November 15th, 9 A. M.—Temperature 98° F., pulse 100, respiration 30. Much improved. Appetite quite good.

November 16th, 9 A. M.—Temperature 98° F., pulse 100, respiration 30. Child decidedly better, but the voice still hoarse.

December 4th.—Child about the house and in its usual health, with the exception that the voice continues somewhat hoarse. This is the youngest patient that has yet been saved by intubation.

CASE VII.—November 9th I was called to perform intubation upon a little child four years of age, suffering from severe constitutional diphtheria with invasion of the larynx. The child had been sick for five or six days with diphtheria, and the larynx had been involved two days. The child was in imminent danger of suffocation. Ably assisted by Dr. Bosworth and Prof. Nelson, tubage was performed without the least difficulty, and with immediate relief to the urgent symptoms. The child died easily forty-eight hours later from the profound constitutional infection.

CASE VIII.—November 13th I was called by Dr. Kossakowski to operate upon a child two years and two months of age, suffering from membranous laryngitis. The child was in a desperate condition, and could have lasted but a short time. On account of the distance of the patient from me and the danger that might result if the tube was rejected, a size larger

than was appropriate for its age was introduced, in order to make sure of its retention. This was worn easily and with great comfort for four days, when it was removed without difficulty. The child was unable to breathe comfortably without it, and fearing the result of the continued pressure of the large tube upon the vocal cords a smaller one was introduced. This was done with the assistance of the father and Dr. Kossakowski very quickly, not requiring over ten seconds. Again there was the immediate relief from the alarming symptoms.

On the fifth day this tube was rejected and we were summoned in great haste. The child was again in a most critical condition. The respiration was greatly impeded, the countenance pale and anxious, dyspnœa intense and the pulse feeble and rapid. The larger tube was again reintroduced, again violent spasmodic coughing occurred, with expectoration of quantities of ropy mucus and shreds of false membrane. The silk bridle was removed, and again all the alarming symptoms subsided. On the ninth day the tube was easily and quickly removed, and although the respiration was somewhat embarrassed it was thought best not to reintroduce the tube. In about three hours we were again summoned in great haste, and on reaching the child it was found nearly asphyxiated. The lips and fingers were blue, the face livid, and the extremities cold. Respiration was carried on with the greatest difficulty. The child would soon have been dead. The tube was quickly reintroduced, small pieces of membrane rejected, and again the little patient was saved from impending death.

The child took abundance of nourishment, and wore the tube without annoyance. On the thirteenth day, assisted by

Dr. Kossakowski, of this city, and Dr. D. S. Clark, of Rockford, the tube was again removed without difficulty. Respiration considerably embarrassed without the tube. An emetic was given which acted promptly, but only increased the difficulty of respiration. After waiting one hour and a half, during which time the dyspnœa gradually increased, it was considered unsafe to leave the child, and the smaller tube was again reintroduced. On the fourteenth day this tube was rejected, but it was not necessary to reintroduce it. The child made a rapid and satisfactory convalescence.

CASE IX.—Nov. 16th, Dr. Kossakowski again called upon me to perform intubation upon a little child three years old. It was a most unfavorable case. The family were crowded in two small rooms, and the child was found lying on a feather mattress on the floor in the corner of the kitchen. It was in the last stages of suffocation from membranous croup. One of the neighbors held the child in the lap, and with the assistance of the doctor intubation was quickly performed. The child revived and the next day took dinner with the family. The child died forty-eight hours later from extension of the exudation below the tube.

CASE X.—Nov. 20th I was requested by Professors Cassleberry and Hatfield to see a boy of five years in the very last stages of membranous croup. The patient had been sick about eight days, and twice there had been reformation of the membrane after its complete rejection. At this time there was evidence of extensive exudation into the bronchi. Both physicians pronounced the case a most unfavorable one, and it was scarcely expected that intubation would give relief. However, the operation was quickly performed and large quantities of muco-

pus and softened membrane expelled through the tube. Contrary to our expectation, great relief was given. The patient died about fifty hours after the operation with evidence of reaccumulation of membrane in the bronchial tubes together with pneumonia of the left lung. In this case considerable difficulty was experienced in removing the tube; several attempts were necessary, but it was extracted without ether. The child was so near death that an anæsthetic was not admissible, and it was hoped that by removing the tube the respiration might improve, but the unfavorable symptoms were even more distressing, and death occurred two hours later.

CASE XI.—Nov. 21st I was called to see Charley B., a boy of five years, a patient of Dr. Valin, who kindly gave me the following history: He was taken ill with a severe form of pharyngeal diphtheria, Nov. 7th. Both tonsils and uvula were covered with diphtheritic membrane. The temperature for several days remained at 102½° F., and the pulse 130. On the 18th the membrane disappeared from the fauces. On the 19th there was evidence of extension of the disease into the larynx. On the 21st the child was in imminent danger of suffocation. The dyspnœa was intense, and the child was struggling desperately for breath. He was covered with perspiration, and the features were livid and anxious, and the pulse was becoming weak and very rapid. The child certainly could have lasted but a few hours longer. With the aid of the father and Dr. Valin intubation was performed, requiring but a few seconds. There immediately followed severe spasmodic coughing, with expectoration of quantities of muco-purulent matter and shreds of membrane. When the silk bridle was removed the respiration became

easy, the cough subsided and the child passed into a quiet natural sleep.

Temperature, 102° F.; pulse, 120; respiratinn, 20.

Nov. 22nd, 4:30 A. M., temperature, 102° F.; pulse, 120; respiration, 24. 8 A. M., temperature, 98½° F.; pulse, 100; respiration, 22.

Nov. 23rd, at 4 A. M., the tube was expelled during a violent attack of coughing. The dyspnœa at once returned, and when seen, the child was again laboring desperately for breath. The tube was reintroduced, and again all violent symptoms subsided. At 9 A. M., temperature, 100½° F.; pulse, 120; respiration, 22.

Nov. 24th, temperature, 100½° F.; pulse, 120; respiration, 22.

Nov. 25th, temperature, 100° F.; pulse, 120; respiration, 24.

Nov. 26th, at 4 A. M., the tube was again expelled, this being the fifth day after its first introduction. As the respiration was comparatively easy the tube was not reintroduced. Temperature, 98½° F.; pulse, 126; respiratinn, 24.

Nov. 27th, temperature, 100° F.; pulse, 120; respiration, 24.

Nov. 29th, temperature, 98½° F.; pulse, 108; respiration, 22.

Dec. 5th, child entirely well, and but very slight hoarseness of the voice.

CASE XII.—Nov. 30th, Prof. Holroyd called me to perform intubation on a little boy of four years. The child had been sick for several days with diphtheritic croup, and when seen was failing rapidly. The tube was quickly introduced with the usual relief. About 1 A. M., Dec. 1st, a portion of membrane, about 1½ inches in length by ½ in. in width, became detached and completely occluded the tube. As a result, both the tube and membrane were rejected. We were at

once summoned, but before we were able to reach the child he was nearly asphyxiated. The tube was again introduced with prompt and great relief. The respiration was considerably accelerated but easy, and the child was left sleeping. After giving explicit directions in regard to the use of the instruments they were left with the doctor. About 4 A. M. the tube was again rejected. We were at once summoned, but before arriving Professor Holroyd had succeeded admirably in introducing the tube. The respiration, although less easy, was quite rapid, the skin hot and the pulse very rapid. There were evident symptoms of congestion of the lungs. A hot mustard foot-bath was given, warm flaxseed poultices covered with oiled silk applied to the chest and four-grain doses of quinine given, alternating with 1-32 gr. of bi-chl. mercury. The child died at 4 P. M., very easily, evidently from congestion of the lungs.

CASE XIII.—Through the courtesy of Dr. C. E. Caldwell, I was called, Dec. 2nd, to see Mark H., a boy of five years. The doctor has kindly given me the following history: The boy had been sick one week with the measles when, as the eruption was fading, diphtheria occurred. The pharynx was well covered with the diphtheritic deposit, which rapidly extended into the larynx. Dec. 2nd, the child was in great danger of suffocation, and certainly could have lived but a few hours. With the assistance of Dr. Caldwell and Dr. E. J. Ogden, the operation of tubing was quickly accomplished. Large quantities of mucuo-pus and broken down membrane were expelled and the patient was soon sleeping quietly. ·1-32 of a gr. of bi-chl. mercury had been given every half hour and was continued, which constituted the only treatment.

6 P. M. Pulse, 150; temperature, 102° F.; respiration, 30. 10 P. M. Pulse, 150; temperature, 101° F.; respiration, 24. Takes nourishment well.

Dec. 3rd, 9 A. M. Pulse, 140; temperature, 100° F.; respiration, 24. Rests well and takes nourishment in liberal quantities. 9 P. M. Pulse, 150; temperature, 99° F.; respiration, 24.

Dec. 4th, 9 A. M. Pulse, 136; temperature, 99° F.; respiration, 24. 9 P. M. Pulse, 130; temperature, 98½° F.; respiration, 24.

Dec. 5th. The child was seized with violent coughing and vomiting and the tube was rejected. Pulse, 120; temperature, 98½° F.; respiration, 24.

Takes nourishment plentifully. Voice quite hoarse.

Dec. 6th. Continues to improve.

Dec. 7th. Is convalescent.

CASE XIV.—Dec. 3d I was informed by Dr. Dahlberg that he would send a little patient, suffering from membranous laryngitis, to the hospital of the College of Physicians and Surgeons, for me to perform intubation upon. The child, four years of age, had been suffering for three days, and the doctor thought, as the surroundings were most unfavorable, that his chances would be far better at the hospital than at home. The people were advised to take the child in a closed carriage, but feeling too poor to afford it, the little patient was taken in a street car, a distance of several miles. The child arrived in a most critical condition, and those who witnessed the operation certainly will testify that the patient could not possibly have survived more than a very few hours. Assisted by Dr. Dahlberg and Prof. Quine, the operation was performed in the presence of the class. The

tube when introduced was entirely filled and occluded with false membrane. After struggling for a moment the tube was rejected, a fortunate occurrence, as the child could not have lived with the tube so completely occluded. As this tube was passed with some difficulty, a size smaller was quickly introduced and all alarming symptoms subsided.

Dec. 4th, 9 A. M., temperature, 100° F.; pulse, 156; respiration, 36. 3 P. M., temperature, 100¾° F.; pulse, 137; respiration, 26.

Dec. 5th, 9 A. M., temperature, 101½° F.; pulse, 150; respiration, 22. 5 P. M., temperature, 100¾° F.; pulse, 142; respiration, 26.

Dec. 6th. The inflammation had extended upward into the nasal passages and the left nostril was filled with a bloody muco-purulent secretion. 9 A. M., temperature, 100° F.; pulse, 150; respiration, 32. 3 P. M., temperature, 101½° F.; pulse, 155; respiration, 40.

Dec. 7th, 8 A. M., temperature, 101½° F.; pulse, 140; respiration, 36. 1 P. M., temperature, 102° F.; pulse, 150; respiration, 48.

At 6 P. M., assisted by Prof. Earle, Dr. Dahlberg and Mr. Anderson, the tube was quickly and easily extracted, after remaining in position a little over four days.

The patient remained very feeble for the next few days, but gradually the strength returned, and the child was discharged from the hospital Dec. 14th entirely out of danger. In this case the treatment consisted of 1-32 gr. of bi-chloride of mercury for the first two days, given every hour; for the subsequent two days less frequently, and after the removal of the tube, full doses of iron and quinine.

CASE XV.—Dec. 9th I was called to see a little boy of

four years, and learned that he had been sick for nearly a week. The child had sore throat, white spots on the tonsils and soft palate, and considerable fever. Two days before, the cough became croupy and the respiration embarrassed, and the father said that during the previous night he thought the child would choke to death every minute. The child had been under domestic treatment. Upon inspecting the throat, ulcerations were observed upon the uvula and both tonsils, covered by a thin coating of membrane. The child was in great danger, the voice and cough suppressed, deep sinking in of the tissues at the base of the thorax, pale and covered with perspiration. As the symptoms admitted of no delay and as no physician was at hand, the mother courageously held the child in her lap, while the father held the head, the gag placed in position, and the tube quickly introduced, requiring about ten seconds. Acting upon a suggestion of Dr. O'Dwyer, a salve containing 25 per cent. of nitrate of silver was thoroughly coated over the tube just below the head. The action of the astringent upon the false membrane and the tissues about the vocal cords, I am convinced was beneficial, although considerable irritation was produced. There is one objection to the use of nitrate of silver in this manner. It destroys the gold plating of the tube. The other astringents will perhaps serve as useful a purpose without this objection.

Just before the tube was introduced the pulse was 140; respiration, 30; temperature, 101° F. At 7 P. M., pulse, 140; respiration, 40.

Dec. 10th, 10 A. M., pulse, 140; respiration, 40. 9 P. M., pulse, 140; respiration, 48; temperature, 102° F.

Dec. 11th, 9 A. M., pulse, 130; respiration, 36; temperature, 100½° F. 9 P. M., pulse, 120; respiration, 32.

On the 12th, three days after intubation was performed, the tube was removed without difficulty. At this time as well as when the tube was first introduced considerable muco-pus and shreds of false membrane were rejected. It became unnecessary to reintroduce the tube and the child made a rapid and complete recovery.

CASE XVI.—Dec. 11th I was called by Dr. Pierpoint, of Englewood, to perform intubation upon a little patient three years old. The child had been suffering several days with a bad form of diphtheria which finally invaded the larynx. When intubation was performed the child was in imminent danger of strangulation.

The operation gave entire relief, but the patient died forty-eight hours later from the occurrence of pneumonia and from the diphtheritic infection.

CASE XVII.—Jan. 4th. Through the courtesy of Prof. Quine and Dr. Willard I was called to see a little girl five years old in the last stages of membranous croup. It was evident to all that the child must have died in a very short time. Professor Quine was positive that the patient could not have lived until midnight. When the tube was introduced a large piece of membrane was rejected and all the alarming symptoms subsided. The next day the child was up and playing about the room nearly all day. The little patient experienced no inconvenience from the presence of the tube excepting when she swallowed liquids. Every day she was about the room, and on one occasion even helped her mother to wipe the dinner dishes. On the third day the tube was removed with the assistance of Dr. Willard, of this

city, and Dr. Kimball, of Rockford. There was no necessity of reintroducing the tube, and the child made a rapid recovery. This had been the most remarkable case that has yet come under my observation.

Limited as is this experience, I feel that it is sufficient to establish this as a legitimate operation, and one that is destined to entirely supersede tracheotomy.

3449 Indiana Ave.

EDITORIAL.

THE COOK COUNTY INSANE ASYLUM.

The report of the STATE BOARD OF CHARITIES, recently published, regarding the abuses at the Cook County Insane Asylum, contains some important information and merits careful reading and thought. The first portion of the report deals with evils and abuses as they were found to exist, and were brought out by the testimony given before the committee. Political considerations were found to largely govern the appointment of employés. Conflicts among officers, lax discipline and insubordination are among the evils mentioned. It was found that supplies cannot be easily and quickly procured, and that the patients suffered various "inconveniences" in consequence. This latter statement refers to the sworn testimony of the assistant physician, that at one time over fifty patients suffered from scurvy, and as the result deaths were common. It will be readily admitted that these results were at least "inconvenient" to the patients.

It is not, however, so much with the findings of the committee, which are in the main correct and in accordance with the testimony, as with the remedies suggested, that we take issue.

First, the suggestion that the State take charge of the institution, is disposed of by the Board as impracticable at the present time, because the proximity of the county house and the small size of the county farm are insuperable objections. The facts that the institution has no adequate water-supply and but very imperfect drainage, are much more vital considerations, in our opinion.

Second, that the County Commissioners should place the care of the institution in the hands of a Board of Trustees, who would organize and govern the place substantially as State institutions are governed is recommended. This admirable plan having succeeded so well in many of our State institutions, it is but natural that it should have the earnest support of the State Board of Charities. Unfortunately the problem is quite different. With the State these matters are regulated by the statute, and the legislature cannot interfere except by an amendment to the organic law. The constitution directs that the affairs of Cook county shall be managed by a board of fifteen commissioners. Their power is absolute: they appropriate funds, purchase supplies, pay the bills, audit their accounts, and finally, but not least, appoint the grand jury, the only body which has authority to impeach them. Any limitation of their powers is purely voluntary and may be abridged or altered at any time only by themselves. Is it to be supposed that all of the Commissioners will voluntarily surrender their control of our largest public charity to the care of a few men whose only aim would be the benefit of the unfortunate? How long would men of character and integrity be found willing

to retain such positions, after influence was brought to bear in the interests of "the party?"

Third, that the State Board of Charities assume the relation of trustees as outlined in the above plan. This is decidedly the best suggestion, as the State Board is, by its character and manner of its appointment, beyond the reach of any local influence. But this plan is open to the objection that so much control as is surrendered is only voluntary, and may be entirely abrogated by a simple majority vote at any meeting. Any dispute that may arise could be easily settled by the County Commissioners withholding the appropriation, when the management must come to terms or give up their control.

The fact remains that ever since the establishment of the "Cook County Crazy-House," over thirty years ago, the management of that charity has been a disgrace. It would seem as if the only remedy is for the State to establish one or more additional hospitals, and to take charge of the insane now in the county house. The facts regarding the Cook county insane are true of most of all the insane now in county receptacles. The State cares for at least seventy per centum, and there is no reason why its care should not be extended to all.

County provision for the insane has always proved from 30 to 50 per centum more expensive than State care. The annual saving to the tax-payers of this county would build a new hospital in a few years, besides conferring an inestimable boon upon a neglected and unfortunate class of our community.

THE MAY MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY.

The eminently successful character of the Eightieth Annual Meeting of the MEDICAL SOCIETY OF THE STATE OF NEW YORK, recently held in Albany, places in conspicuous and unpleasant relief the usual features of the annual gatherings of the ILLINOIS STATE MEDICAL SOCIETY. The papers read in Albany were in the large majority of cases of great practical interest, and founded upon personal observation and experiment. There was a refreshing absence of reports of chairmen of Sections, embodying the progress of medical science in their respective departments. These reports, demanded by the constitution of our State Society, degenerate only too frequently into compilations from the various American medical journals, which every practitioner receives. Even admitting that the report be prepared conscientiously and in conformity with the design of the framers of the constitution, the space of twenty minutes,—the period of time allotted to each chairman,—is inadequate to the demands of the occasion. But the necessity for systematic reports, on progress of the medical science, does not exist at the present day, as it did even a few years ago. With the appearance of the *Index Rerum*, the various *Retrospects*, *Digests*, *anelectics*, and *special departments* in our leading periodicals, has not the preparation of laborious *résumés* of novelties become a work of supererogation? Would not the critical discussion of a single topic, or the narration and analysis of an instructive case prove of greater interest and importance under existing conditions?

At the Chicago meeting, nearly two years ago, S. Walter Hay presented the following preamble and resolutions:

WHEREAS, In the preamble to the resolution determining the formation of the State Medical Society it is set forth, as one of the objects of the Society, that "it shall supply more efficient means than have hitherto been available for cultivating and advancing medical knowledge, etc.," therefore, be it

Resolved, That a prize of $100.00 be offered by the Society for the best report of original investigations into the Etiology, Pathology and Treatment of Diphtheria.

That a second prize of $100.00 be offered for the best tabulated report of not less than ten cases of any form of disease under the professional care of the reporter.

The resolutions were adopted, and Drs. Walter Hay, H. A. Johnson, and John E. Owens were appointed a Committee on "Prize Essays." This Committee made no report at Springfield last year, for the reason that there were no candidates for the honors. The sum of one hundred dollars, of course, is entirely inadequate to the expenses involved in any investigation of Diphtheria, but the second prize ought to have enlisted interest. As informed at present, the Society continues to offer both prizes under the same conditions.

Probably no state west of the Alleghanies is of as great interest to the general profession of the country as Illinois. This fact is probably due to the important acts in medical legislation secured within recent years, under great obstacles, by the determined and united efforts of the local profession. Much remains to be done in this important field. The hands of the members of the State Board of Health must be upheld in the prosecution of their arduous labors.

Fortunately the Demonstrators' Association no longer requires aid in securing anatomical material. But then, legislation with reference to the insane is in a very chaotic state, as recent developments in the care of this unfortunate class in Cook County abundantly demonstrate.

DOMESTIC CORRESPONDENCE.

CHLORAL HYDRATE IN THE TREATMENT OF THE HYPEREMESIS OF PREGNANCY.

CHESTERTON, INDIANA, February —, 1886.

TO THE EDITORS OF THE *Chicago Medical Journal and Examiner.*

Gentlemen:

Having noticed that chloral hydrate is not especially mentioned in medical literature as a remedy for alleviating that distressing, and at times uncontrollable, affection, the vomiting of pregnancy, it may not be amiss that I note my experience with this remedy.

Several years ago I was called to treat a patient affected with vomiting in pregnancy who had been previously treated by several physicians without relief.

I administered a rectal injection of chloral hydrate with the object of securing the much-needed sleep, which she had been unable to obtain for several nights.

I was very agreeably surprised, not only that I succeeded in my object, but that the vomiting immediately ceased, and did not return during that pregnancy. The patient rapidly recovered from her disagreeable condition, and was able to take a generous diet without the least discomfort.

Since this time I have invariably prescribed chloral hy-

drate injections for vomiting in pregnancy, always with the desired results.

Recently, in the treatment of a young woman married but a few months, I ordered this treatment, but she refused to disturb her usual rectal toilet, and the remedy was administered *per os*, with the same results as *per rectum*. Yet I prefer the latter method, and believe it is more certain in procuring relief, for very obvious reasons.

I hope that my fellow practitioners who have not used this remedy will submit it to trial, and I am sure their patients affected with vomiting in pregnancy will be better enabled to retain their morning meal.

Why this well-known drug controls this affection I will not say, but am content with the satisfaction of knowing that it will do so.

D. D. MARR, M. D.

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

At a stated meeting held November 2, 1885, D. HAYES AGNEW, M. D., President of the Academy, in the chair, a communication entitled

NOTES ON THE NEW ANTISEPTICS, HYDRONAPHTHOL AND THE POTASSIO-MERCURIC IODIDE, WAS READ BY R. J. LEVIS, M. D., one of the Attending Surgeons to the Pennsylvania Hospital.

The following are the claims made for the newly-discovered antiseptic, hydronaphthol:

It is at least twelve times as effective as carbolic acid, and is entitled as a true antiseptic to occupy a position in the comparative tables next to the mercuric bichloride.

It is thirty times as potent as salicylic acid, sixty times as effectual as boric acid, and has six hundred times the antiseptic power of alcohol.

Hydronaphthol is soluble when placed in cold water to the extent of one part in two thousand. It is soluble in hot water in the proportion of one to one hundred; but when the water becomes cooled to ordinary temperatures a precipitate occurs, leaving a solution of one to one thousand. In this strength of one to one thousand it permanently prevents the development of the germs of putrefaction in all putrescible fluids.

Whilst the true antiseptic or *inhibitory* action of hydronaphthol in such cold aqueous saturated solution is perfect, its germicidal and proper disinfectant power is ineffective. For the destruction of already existing germs, such as have a tenacious vitality, as those of anthrax bacilli and pathogenic micrococci, it therefore cannot be relied on. As to its action in this regard, as compared with carbolic acid, it should be remembered that a ten-per-centum carbolic solution is required,—a strength practically improper in wound-treatment. In ordinary antiseptic practice, carbolic acid is valuable only on account of its inhibitory action.

The first use of hydronaphthol as an antiseptic was by Dr. G. R. Fowler, of Brooklyn, to whom the profession is indebted for its introduction to practical surgery. My own experience with the antiseptic action of hydronaphthol in the wards of the Pennsylvania Hospital and in private surgical practice confirms his observations, as given in his recent articles in the *New York Medical Journal.*

Hydronaphthol is a grayish substance, in the form of

crystalline lamina, having a slightly aromatic taste and odor. It is soluble freely in alcohol, ether, chloroform, glycerin, benzole, and the fixed oils.

In the aqueous saturated solution of one to a thousand it is absolutely unirritating, and has no toxic action, either local or systemic; is free from unpleasant odor, and has no injurious action on metallic instruments or on clothing fabrics.

Besides its use in aqueous solution, I have used it in the form of a powder diluted, preferably with the oxide of zinc in the proportion of one to fifty.

I believe that hydronaphthol may well displace carbolic acid from practical surgery.

The potassio-mercuric iodide is four or five times as powerful as a true germicide or disinfectant as the mercuric bichloride. For such use it is effective in aqueous solutions in the proportions of only one to twelve thousand.

The potassio-mercuric iodide is made by simply dissolving equal quantities of the biniodide of mercury and the iodide of potassium in distilled water. The solution is evaporated, and there remain yellow, needle-like crystals of the potassio-mercuric iodide.

In the use of such dilutions of this powerful antiseptic, local irritation is entirely avoided, and the risk of producing the constitutional effects of mercury is greatly diminished.

The introduction into surgical treatment of these two remarkable and powerful substances, hydronaphthol and the potassio-mercuric iodide, will do much to overcome some of the objections and inconveniences of antiseptic practice.

DISCUSSION.

Dr. S. W. Gross: Dr. Levis has made the statement that the potassio-mercuric chloride is a far safer germicide than the ordinary mercuric chloride. The solution of one to twelve

thousand is really not so much weaker, if we look at it properly. The potassio-mercuric chloride is dependent for its activity on the biniodide of mercury. It is a well-established fact that the biniodide of mercury is a far more powerful germicide than is the bichloride. Because we use a weaker solution is no evidence that it is not as strong as the bichloride. I can see no advantage in making the potassio-mercuric chloride solution, unless it is to fix the biniodide. In preparing the solution of corrosive sublimate in which we wish to keep gauze, sponges, etc., for a long time, we add to it seven and one-half grains of chemically pure chloride of sodium, with the view of fixing the bichloride so that it will not be converted into calomel. The addition of an equal part of iodide of potassium to the biniodide will fix that salt so that it will not be decomposed. There is therefore really no advantage in it, except to prevent changes in the biniodide.

Hence this is not a new remedy, for the biniodide has been used as a germicide. I do not see the advantage of using a stronger substance in what is apparently a weaker solution. It is of course impossible to say anything as regards the constitutional effects, for Dr. Levis has not had sufficient experience to determine whether or not toxic symptoms are produced by this agent. There is no reason why,—if the potassio-mercuric chloride is used as carelessly as the corrosive sublimate often is,—there should not be toxic symptoms produced. If the cases of poisoning with the bichloride of mercury which have been reported are examined, it will be found that the bichloride has been used in unusually large quantities. For example, a one to one thousand or one to two thousand solution has constantly been used as a fluid to irrigate the wound during a surgical

operation. Again, in psoas and iliac abscess, where a large quantity of the solution has been introduced after the evacuation of the pus, toxic symptoms have arisen. If a little care is exercised, there is no reason why toxic symptoms should arise from any of the mercurial solutions.

In regard to hydronaphthol, I know nothing of it from experience. I, however, know that Dr. Fowler has been making experiments with it for years, and, even after the adoption of mercurial solutions, used saturated compress with naphthaline outside of the corrosive-sublimate dressings to keep the wound enveloped in the vapor of naphthol, according to his statement.

Dr. R. J. Levis: Dr. Gross will bear in mind that with the potassio-mercuric chloride there is only one-fifth the amount of mercury used. We know that the mercuric bichloride is an unstable salt in the way in which it is generally used, and for ordinary uses it can hardly be made a stable salt.

Dr. S. W. Gross: It is a stable salt. A solution of corrosive sublimate in water can be kept for a week without any change. To make a stable solution for sponges and dressings, it is better to add chloride of sodium.

Dr. R. J. Levis: I used the term unstable with reference to the mercuric chloride in contact with organic matters. Under such circumstances it is liable to be converted into ordinary calomel.

Dr. S. W. Gross: This is a mistake. Corrosive sublimate does not become unstable in the presence of organic compounds. This has been asserted, but there is no proof of it. If it did undergo this change, why do we have toxic

symptoms arising when large quantities of the solution are injected into abscess-cavities?

Dr. J. M. Barton: As regards stability, the mercuric chloride does not seem to undergo any chemical change. At the same time, it undergoes some change when brought in contact with organic matter. If this were not so a large mass of odorous material could be disinfected with half a grain of corrosive sublimate.

Dr. Charles W. Dulles: It is well known that the salts of mercury in the presence of albumen are apt to be converted into albuminoids, but this does not prevent the constitutional effect of mercury. I believe that this change is not in sufficient quantity to interfere with the antiseptic properties of the substance. The effect of the potassic mercuric chloride in the presence of albumen is somewhat similar. Dr. Oliver, who has made some extensive experiments in regard to albumen in the urine, has found that this potassio-mercuric chloride is the most delicate test for albumen.

Dr. S. W. Gross: In corroboration of what Dr. Dulles has said, I would recall the fact that when Lister began the use of corrosive sublimate he employed a solution which was too strong, and found that a certain amount of erythema and vesication was produced. He now procures the serum of the blood of a horse and makes his solution in that way.

Dr. Addinell Hewson: I have had some experience with hydronaphtol, but I have seen it produce irritation, and even such erythema as was alarming. This was a solution of one to two thousand. The effects were produced within twenty-four hours. The patient experienced constant distress from the time of its application.

Dr. R. J. Levis: I have found the one to two thousand solution almost tasteless. I have placed it in one eye without being conscious of its presence.

Dr. Addinell Hewson: In this case there was a tendency to erythema, and the result undoubtedly proved that the remedy had no effect as a germicide.

Dr. Levis: That is not claimed for it.

Dr. F. H. Gross read a paper on *A Suture for the Approximation of Deep Wounds.*

Dr. R. J. Levis: I wish to call attention to a suture to be used in place of the buried suture. Every surgeon recognizes the advantages of approximating the surfaces of wounds as conducing to healing. We have all been too much satisfied with approximating simply the edges of wounds without paying any attention to the approximation of the deeper parts. In amputations and in the removal of tumors from such situations as the groin and axilla, large spaces are left which may become filled with blood, serum, or the products of inflammation. Since the introduction of antiseptic surgery, and particularly since the use of animal sutures has been adopted, some surgeons have used what are called buried sutures. These have their disadvantages, and sometimes it is quite difficult to apply these sutures so as to secure complete approximation.

Some time ago I devised a simple plan of approximating the deeper parts of a wound. Taking an amputation-wound for illustration, to approximate the flaps in this manner I take an ordinary silver wire armed at each end with a straight needle, introduce one of the needles into one flap at the bottom of the wound and bring it out about half-way between the angle of the wound and the edge of the flap.

It is then carried across the wound and through the opposite flap. The second needle is then carried through in the same manner. A figure of 8 is thus formed. When the ends of the wire are drawn upon, the deeper portion of the wound is approximated. The superficial portions of the wire are then carried across the surface and bring together the edges. Superficial sutures are also introduced. I have used this in a number of amputations, and think it particularly applicable to the closure of wounds after the removal of large tumors of the breasts where the axillary glands are also removed. In a case in which I removed the breasts four days ago there is now complete union. I insert as many of these sutures as may be necessary. I have always used wire, but ligature rendered antiseptic would probably be almost as good.

Dr. J. Ewing Mears: In deep wounds of the axilla, what tissues do you approximate?

Dr. Levis: Fatty tissue, muscular tissue, or whatever may be necessary.

Dr. Addinell Hewson: I have used the suture of Dr. Levis frequently, but I have used it without the addition of superficial sutures. I employ, instead, collodion and gauze. This I find more satisfactory. I have had direct union through a stump without suppuration whatever on more occasions than one.

Dr. S. W. Gross: I have seen Dr. Levis apply this suture, and it does approximate wounds in a most excellent manner. It is very easy to get the suture out. It is very desirable to get rid of the presence of any foreign body in the wound. Neuber, the introducer of the decalcified-bone tubes, recognized their inconvenience, as well as the disad-

vantages of the ordinary rubber drainage-tube. It was he who proposed buried sutures. He also resorted to other means of drainage. In amputation of the breast he occasionally punched holes in the skin to allow free drainage. In removal of axillary tumors he inverted the skin on each side, attaching the anterior portion to the pectoralis major and the posterior to the latissimus dorsi, thus making a funnel-shaped opening through which drainage could be effected.

Dr. T. G. Morton: During last winter, something similar to this was proposed by Dr. Packard at the Pennsylvania Hospital. He suggested the introduction of a long pin across the stump, and then the application of a figure of 8 around, making careful compression. This would answer very much the same purpose.

Dr. R. J. Levis: This suture might be called the duplex suture or the deep-crossed suture. I think it would be very suitable in the high operation for stone, the deep portion of the suture including the bladder and the superficial portion including the superficial tissues.

PIN FOR TREATMENT OF FRACTURE OF THE PATELLA.

Dr. Morton: I wish to exhibit a pin which I have used in the treatment of fractured patella. For a number of years I have been using the ordinary Malgaine's hooks and the modified Malgaine's hooks. It occurred to me that if I could pass a steel pin and keep the fragments approximated I should have an easier method than with the hooks. I devised this pin, which has a detachable handle and works as an ordinary Brainard's drill. In the case in which I applied it the pin went through without difficulty. Over the extremities shoulders were applied. The fragments were then

not disturbed for three weeks. There was not the slightest irritation. Lead-water and laudanum were kept applied. When the pin was removed, I found under one of the shoulders a small collection of pus. In order to obviate this I have had a shoulder made which does not come in contact with the skin at a right angle. To avoid the possibility of pulling any pus into the bone when removing the pin I have made it in two pieces, united in the middle with a screw. When it is desired to remove the pin, the parts are unscrewed and the two pieces removed. I have had less trouble with this than with any other method of treating fractured patella.

In introducing the pin I did not employ any anæsthetic, and the patient made no complaint. The whole manipulation did not occupy over fifteen seconds. It is impossible to apply Malgaine's hooks without an anæsthetic. I was surprised at the ease with which the pin passed through the bone. It met with no more resistance that it would in going through a hard Boston cracker.

I was unable to apply the pin until thirteen days after the fracture, on account of the effusion within the joint. I have never put on the hooks until all local irritation has subsided.

In this case I do not think that there is bony union. I have never seen bony union where there has necessarily been delay, but there is here exceedingly close union.

Dr. Wm. W. Keen reported a case of *Obstructive Jaundice, Cholecystotomy for Impacted Gall-Stones.*

Albert Henry K., German, aged 45, residing in Philadelphia, was admitted into the hospital September 21, 1885, during the service of Dr. W. W. Keen. Parents healthy.

He is the only living one of twelve children; the rest died during infancy.

General health was good, with occasional attacks of gastro-intestinal catarrh. Four years ago he had a severe attack of colic, the pain arising in the right hypochondriac region and extending to the umbilicus. The attack lasted several hours, and was relieved by medicine. The following year he had a similar seizure, followed by a chill, loss of appetite, vomiting, and constipation, and in a short time the conjunctiva was jaundiced.

He had another attack June 12, 1884, followed by nausea, vomiting, chill, loss of appetite, constipation, high-colored urine and clay-colored stools, with marked jaundice of his whole body, which continued ever since. Since that time the attacks have become more frequent, occurring once or even twice weekly.

He had been, since January 1, 1885, under medical care, but with no improvement. He first came to the dispensary August 6, and was under observation and treatment, but without any change for the better.

Upon admission, it was noted that he had lost some flesh; his mind was dull; the skin, conjunctiva, and mucous membrane were intensely jaundiced; marks of scratching appeared on the abdomen, and he suffered much from itching and stinging at night; the pulse was 54 and full; tongue slightly coated with yellow fur in the morning. His appetite was poor, bowels costive, and the stools were of a clay color. He also complained of flatulence and constant tenderness and distress in the epigastrium. The urine was high-colored, acid, sp. gr. 1025; no albumen was detected, and no sugar; bile-pigment was present.

Physical examination showed a tumor below the margin of the ribs in the right hypochondriac region; it extended from the right nipple-line three and a half inches to the median line, and to within two and a quarter inches of the umbilicus. It was not absolutely flat upon percussion, but tender and elastic. The liver-dullness extended from the sixth interspace in the nipple-line to one-fourth inch below the margin of ribs. The abdomen was not distended; spleen of normal size; lungs and heart both normal.

September 24. Had severe headache; pain in the epigastrium, followed by a rigor lasting three hours, then fever. 5 P. M. Temp. 101.5°; pulse 80; podophyllin (gr. ½ at night) acted freely on the bowels.

September 28. Dr. Keen introduced into the tumor a hypodermic needle, and thought he detected a stone. A very small quantity of liquid was withdrawn; it was dark-colored and mostly blood.

October 1. An aspiratory needle was introduced into the tumor three inches, and a probe passed through it. A stone was detected.

October 4. He had a chill, which lasted three hours, followed by the usual symptoms. The operation which was appointed for the next day was, therefore, postponed.

October 10. Dr. Keen, assisted by Drs. Grove, Mears, O'Hara, Willetts, Elmer, Learned, Boyd and others, operated, with the usual antiseptic precautions, including the spray, carbolic acid being used.

The surface of the body was first washed off with carbolized water; etherization was commenced at 1.30 P. M. An incision of three inches was made parallel with the margin of the ribs, commencing one and a half inches below the ensiform cartilage, and extending over the prominence of the tumor. All the

vessels were tied with catgut ligature. The abdominal walls were thick. All hæmorrhage had ceased before the peritoneum was opened. Now the liver came into view, and what was thought to be the tumor—the distended gall-bladder—proved to be an enlarged left lobe of the liver, presenting much more to the right than usual. The gall-bladder could neither be seen nor felt.

In order to obtain more room, the incision was prolonged about two inches to the right. The colon and omentum were now exposed. Still the gall-bladder could not be detected with certainty; but a hard mass could be obscurely felt, which was believed to be gall-stones. It lay transversely, directly in front and slightly to the right of the spine, and almost absolutely in contact with it. To obtain still more room to work at such a depth, another incision was made, beginning at the upper end of the first incision, and extending downwards in the linea alba three inches. The closest search was made for the gall-bladder, being still in doubt as to its situation.

From the posterior part of the transverse fissure, almost in contact with the spine, an apparently uniform mass, continuous with the gastro-hepatic omentum, extended downwards and forwards, in the posterior part of which, as stated, the gall-stones could be somewhat obscurely felt near the liver; and, farther away from it, a softer mass, which ought to be the flaccid gall-bladder. These lay in such relation to each other that the gall-stones were thought to be in the cystic and the common duct.

Into this softer mass—the supposed gall-bladder—a small opening was made; but it was soon evident that this was the duodenum, as the finger detected the pylorus. Discovering this, the wound in the duodenum was closed with five interrupted and five carbolized-silk Lembert's sutures. The harder

mass containing the gall-stones was now carefully lifted to a slight extent by the finger and thumb, and the wall and tissues in front of it cautiously incised for about three-fourths of an inch, and two stones, respectively three-fourths and one and one-fourth inches in size, removed. The gall-bladder was as firmly contracted around them as a kid-glove clasps the finger, and contained absolutely no fluid. The opening of the cystic duct could be felt by the finger, and was patulous. No other stones could be felt. A probe, it was thought, could be passed from the cyst to the common duct.

The wound in the gall-bladder was stitched with four interrupted and four Lembert's carbolized-silk sutures. All hæmorrhage had apparently ceased. The cavity was carefully cleansed, and the abdominal walls, including the peritoneum, were sutured with wire, and the wound dressed with bichloride-of-mercury gauze. The operation lasted until 4.45 P. M. His pulse during the operation was never more than 75, nor under 60, and his skin was fairly warm; but his respiration, from early in the operation, was sighing.

After the operation, he suffered from moderate shock. Hot bottles were applied along his extremities.

5 P. M. Temperature, 99.5°; pulse, 88. He suffered very much pain and complained of thirst. Morphine, gr. $\frac{1}{6}$, and cracked ice.

5.30 P. M. Hiccough; relieved by atropia, gr. $\frac{1}{120}$.

7 P. M. Pulse 96, and compressible; temp., $99\frac{4}{5}°$. Morphine, gr. $\frac{1}{6}$. Small quantities of brandy and water were given at intervals.

9 P. M. Feeling quieter. Still complains of pain.

11 P. M. Pulse, 104; respiration, 24; morphine, gr. $\frac{1}{6}$, was given at intervals; through the night he gradually failed.

October 11. At 7 A. M., pulse very feeble and rapid; temp.

101⅘°. Digitalis and brandy were given; but he did not rally, and died at 8 A. M.

The post-mortem examination was made at 12 M. Rigor mortis well marked, though the trunk was still warm. All the abdominal contents were deeply jaundiced. About six to eight ounces of blood were found in the belly, and, as the greater part of it was behind the peritoneum and extended to and around the right kidney, it presumably came from vessels injured in the lifting of the mass in which the gall-stones were situated. This had been carefully done by Dr. Grove, as it was impossible to obtain access to it otherwise at such depth, but required some force. No hæmorrhage had been observed at or immediately after the operation. There had been no bleeding from the operation-wounds, either in the shrunken gall-bladder, the walls of which were very thin, or from those in the duodenum or the abdominal walls. There was no hæmorrhagic tendency noticed, as is so often the case in such operations. There also had been no escape of bile or intestinal contents into the peritoneal cavity. No organs were observed except those concerned in the operation.

The liver, gall-bladder, stomach, duodenum, pancreas, and colon were removed in mass, and showed the following facts:

The left lobe of the liver, especially its anterior portion, was much enlarged and somewhat twisted to the right, so that its semi-lunar projection occupied the position of the gall-bladder, and was easily mistaken for it before the operation. The liver was deeply fissured between the right as well as the left lobe and the lobus quadratus. No gall-bladder existed in the proper site for it, but it was found lying transversely in a shrunken condition, as stated, far posteriorly. The common and cystic ducts were patulous. The wounds in the gall-bladder and the duodenum were effectively closed by the sutures, and no

escape of the contents had taken place. No other gall-stones were found. The mucous membrane of the duodenum was deeply congested for a wide extent, undoubtedly from inflammation existing before the operation. The duct of the pancreas was pervious.

So far as I am aware, such complications as this displacement of the gall-bladder, its shrunken condition, and the impossibility of deciding what was and what was not gall-bladder have not before been reported. It may be said that the incision should have been first made at the place where the stones were felt; but it was decided not to do so on account of the obscurity with which they could be felt lying under considerable tissue, which might, in the displaced position of the gall-bladder, be a part of the intestines or contain large vessels, and at the depth at which they were situated it would have been exceedingly difficult, if not impossible, to control the hæmorrhage or repair the damage to the intestinal wall, should it have have proved to be intestine. Indeed, I debated seriously even abandoning the attempt to remove the stones at one time, on account of the difficulty of reaching them; and, on reviewing the case, I am inclined to believe that it would have been better to close up the abdominal wound, and trust to the possibility of the stones ulcerating into the duodenum, to which the gall-bladder was already closely matted.

The fatal issue in the man's debilitated condition was due to the shock of a prolonged operation and the moderate after-hæmorrhage.

One other point demands notice. It is very evident that the hypodermic needle-point did not touch the stones, and it is somewhat doubtful to me whether the probe passed through; the aspirator-needle did, judging from the depth at which they were found. But the sensation of scratching such a stone was

so deceptive that all three of the resident-physicians, as well as myself were under the impression that the probe certainly did so, and we were fairly certain that the hypodermic needle also did.

DISCUSSION.

Dr. William Hunt: What has been the success following this operation?

Dr. Keen: I have not had time to gather the cases together; but when I prepared my paper last year there were thirty-eight cases, with eight deaths.

Dr. S. W. Gross: The percentage of deaths after cholecystotomy is eighteen. The percentage of deaths is far greater than after removal of the gall-bladder, or cholecystectotomy.

Dr. J. Ewing Mears: This case serves to confirm what every one who has had anything to do with abdominal surgery believes: that it is frequently impossible to tell what will be found in the abdomen before it is opened. This case was carefully examined before operation, and what was supposed to be the gall-bladder was outlined; but, when the abdomen was opened, this proved to be the left lobe of the liver. This may be regarded as one of the most obscure cases of cholecystotomy that has yet been performed. In the reported cases there has been no difficulty in locating the position of the gall-bladder.

Dr. W. W. Keen: In the three prior operations which I had done, there was no difficulty in finding the gall-bladder.

DEFORMITY OF THE UPPER EXTREMITIES.

Dr. W. W. Keen: I have here a patient with a deformity of the upper extremities, which I suppose is due to rickets. Precisely similar conditions I have never before seen. This girl is in her fifteenth year, a mulatto, tall and rather slender for her years. One year ago she began menstruating, and at

the same time noticed the commencement of the changes which are now most distinct in the right wrist. There is also marked angular deformity at the elbow. Feeling the olecranon process, there is found considerable relaxation of the ligaments, allowing the ulna to be moved in different directions. In the wrist there is apparently no mechanism which would account for the deformity present. The deformity of the left wrist can, with the exercise of considerable force, be reduced. I would call attention to the ease with which the deformity of the elbow would be overlooked. When the hands are pronated it is not seen; but it is only observed in supination. The other bones of the body are free from evidences of rachitis. There is no trouble about the head, no beading of the ribs or enlargement at the ankles. There is no evidence of inherited specific disease: the father died of consumption, the mother is living and perfectly healthy. There is no evidence of specific disease in the condition of the teeth.

Dr. Charles W. Dulles: Would not this be more properly called a case of osteo-malacia? Rickets is an affection of the bones in the progress of their growth. Osteo-malacia is the term applied to the condition in which bones, having attained their proper development, undergo softening.

Dr. Keen: The bones are not curved to any extent, and in no other bone is there a tendency to softening.

Dr. R. J. Levis: My opinion is that the case is really a neurosis. I look on it as a paralytic condition rather than a true bone-affection. It is analogous to some forms of club-foot, and particularly to knock-knee and the like, which, we know, occur from irregular muscular action.

Dr. W. W. Keen: I cannot understand how this condition could be due to muscular action, either paralysis or contracture. There is no evidence of such a condition. No muscle

is tight, and no muscle springs into relief at any point. The muscles seem to act properly, and the trouble appears to be in the bony system. In consequence of the change in obliquity, the muscles which go across as chords of the arc tend to increase the deformity.

My attention has been drawn to the diminished size of the head of the radius. This might have something to do with the deformity at the elbow, but it could have nothing to do with the condition of the wrist.

Dr. William Pancoast: I noticed that, on pressing the radius firmly against the ulna, a grating could be produced. This was only elicited on firm pressure.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, January 18th, 1886.—THE PRESIDENT, PRO TEM., D. W. GRAHAM, M. D., in the chair.

DR. E. J. DOERING read a paper entitled "MUTUAL PROTECTION AGAINST BLACKMAIL." The author stated that among the many trials which physicians have to encounter in the practice of their profession is the ever-existing liability of being blackmailed. This may either assume the more frequent form of a so-called malpractice suit, or the relatively less frequent charge of a criminal assault, according to the viciousness of the complainant. Such suits against physicians are increasing. One reason quoted was the fact that every city is overrun with petty lawyers, who have little or nothing to do, and are always willing to encourage any suit whatever, if there be the least prospect of getting something out of the defendant. The author stated that since investigating the matter he became con-

vinced that many of these blackmail schemes were settled before being made public. Many a physician preferred being robbed of one or two hundred dollars, rather than incur the publicity, the loss of time, and the endless expense of a lawsuit. Again, the average jury, composed of the ignorant and illiterate, will always have a strong leaning toward the complainant, and against the defendant, in a malpractice suit, as physicians are popularly supposed to be capitalists. The author stated that personally he had never been sued or even threatened with a suit, and it was therefore from no motive of selfish interest, but from a sincere regard for the welfare of the profession, that he advocated the formation of an association for the mutual protection of physicians against blackmailing suits of all kinds. His plan is to organize a society composed of two or three hundred members of the regular profession, all of whom shall be of acknowledged ability, possessing a good moral character and standing in the community. Said association to employ the best legal talent attainable, by the year, to furnish the members such legal advice as they may desire at any time, and defend any suit against the members arising in the discharge of their professional duties. It was stated that the expense to each member of an association composed of about two hundred would not exceed five dollars per annum, and that the initiation fee of five dollars would create a sufficient fund for court expenses. Such an association would be a power in preventing suits. Let it be known that the individual physician is backed by the financial and moral support of a few hundred of the best physicians, and aided by the best legal talent obtainable, and he will be let alone by the offscourings and dregs of society who constitute, al-

most without exception, the blackmailing element in our professional life. The author stated that he was not aware of the existence of such an association as the one proposed, in any city, but the principle, at least, had been carried out recently by the New York Medical Society, in voting $500 to assist in the defense of the Drs. Purdy, members of the society, in the case of Brown *vs.* Purdy. After reading a number of letters from prominent physicians in favor of forming a protective association, and presenting several legal opinions sustaining the advisability, practicability and legal status of such a society, the author concluded by stating his firm belief that such an association for mutual protection is needed; that it would be a power for good; that it would draw the profession closer together; that, in short, it would be based on the principles of a common brotherhood, viz.: equality, harmony, justice and unity.

DR. F. C. HOTZ said that the extract of his letter to Dr. Doering, which was incorporated in the paper, indicated that at the time it was written he did not think favorably of the project. And, after listening with much interest to the doctor's arguments, he saw no reason for changing his opinion. Professional reputation and honor is the most personal of all personal property; if he lost it, it does not hurt anybody but himself, and therefore if any attack be made on it he should certainly wish to employ among the able lawyers the one in whose ability he had the greatest confidence. But he was not sure whether the lawyer retained by this protective union would be the one to whom he should like to trust the defense of his reputation. The attorney might be as able, or abler, than the lawyer of his own choice; but should the case go against him, he should never feel satisfied that the lawyer had done all that could be done for him unless he had full confi-

dence in him. It is with the lawyer as with the physician, a question of confidence, and his patrons find no fault with his treatment as long as they have implicit faith in his ability.

An objection of greater weight, however, has been urged by several of the doctor's correspondents in asking what possible effect it might have if the fact was brought out in court that the defendant belonged to such a union. The lawyers whose opinions were obtained and read by the doctor say it cannot legally affect the case. There is no doubt but that this is true. But the verdict of a jury in malpractice suits is not determined by the legal aspect of the case; and circumstances which cannot have any legal effect upon the case have often made a deep impression upon a jury and decided the case against the physician. To illustrate: In Dr. Bettman's first trial the experts of the prosecution testified so unreservedly in the doctor's favor that had the case been then submitted to the jury without arguments, the doctor would have been acquitted at once. To fortify his cause Dr. Bettman's lawyer called a number of experts whose testimony was of course only cumulative. Now, what did the prosecuting lawyer do? Did he make an effort to break down the expert evidence by scientific arguments? No, sir; but he wiped out its effect upon the jury by the mere waving of his hand, speaking thus: "The defense has piled up a mountain of expert evidence. But, gentlemen of the jury, what does it all amount to? These doctors are working together in the same hospital. Don't you see that they have a common interest to sustain each other, because every one of them may be in the same fix some day? Don't you know they are clannish? They won't admit that one of them can make a mistake. O, no!" One could fairly see the impression this harangue made upon the jury, and they rendered a verdict against the doctor, though it is certain the lawyers will

say the fact of his being associated with the experts in the same hospital should and could legally not prejudice the jury. But it evidently did, all the same. And after such experience, can you for one moment believe it would not damage the physician's cause if it was shown he and his experts belonged to a society formed for the express purpose of mutual assistance in malpractice suits. A mighty poor lawyer indeed he would be who could not make a great deal out of it before a jury.

Very interesting was that part of the paper in which the doctor evolved his idea how this new society could prevent, ward off, malpractice suits. He believes the shysters would not be so eager to engage in this business if they knew they had to fight a corporation with plenty of means to employ the best legal talent. Why this should discourage those fellows, it is hard to understand. They do not sue poverty-stricken doctors. Whom they select for their victims they suppose to be rich and consequently able to employ a good lawyer. They do not expect to have an easy game; but why should they not try it? They don't risk anything by it. The blackmailer's stake is only two dollars and a half for filing his application, and his lawyer's stake is his time, which is not worth much anyhow. So, you see, they have nothing to lose, but much to gain. What difference should it make to them whether the opposing counsel is engaged by one physician or one hundred? If you wish to devise means by which this blackmailing nuisance can be stopped, or at least reduced to a minimum, you must try to get at the roots of the evil; that is, you must find the causes which usually bring it forth. And you will not go far to find them; for you find them right at your door, in our own profession, in the shape of *indiscriminate dispensation of gratuitous services and of unkind remarks*

of one physician about another. Physicians are altogether too quick to give their services gratis to almost anybody at any time. But you know very well people do not value very much what they can get for the mere asking; they do not think much of what they get for nothing. And it is also a widespread notion (especially among the lower, uneducated people) that the quality of service is regulated by the amount of money they pay for it; that the treatment at a free Dispensary, because gratuitous, is not the same, not as good as at the physician's office where they have to pay for it. These people cannot persuade themselves that a physician will take the same interest in a case whether or not he is paid for his services. The poor, therefore, are always suspicious that they do not get their full share of attention; they are quickly ready to charge their physician with carelessness if the case goes wrong. And with a patient in this frame of mind it takes but very little encouragement to begin a suit for damages. And in nine out of ten cases, doubtless, this encouragement is furnished by the members of our own profession. He did not mean to charge physicians with purposely, wilfully instigating a lawsuit against a professional brother. Though this has been done, such extraordinary baseness is a rare exception.

What DR. HOTZ had reference to is the inconsiderate, careless, thoughtless habit of expressing an opinion about a case, or a colleague. To illustrate: A physician at a dispensary shows a bad case to professional friends, and, without thinking of the possible evil consequences, makes in the presence of the patient some remark like this: "Well, perhaps I ought to have done this or that." The patient, already laboring under the impression that he was not fairly treated because he could not pay, sees in the doctor's remark

the strongest confirmation of his suspicion, goes to a shyster and begins a suit for damages. And, doubtless, in a similar way the mind of a patient is often poisoned and set against his physician by a careless or unkind remark of another physician. So many physicians are always ready to express their opinion about their colleagues in the presence of anybody, or to criticize their professional acts upon the information received from a patient or some old woman. Now you all know how these people misconstrue the words of a doctor; how they pervert the facts inadvertently. You must admit you cannot rely on what patients tell you, and you cannot form an opinion that is worth anything of a case you have not seen or been informed about by the attending physician. Why, then, don't you say so when some busybody asks you what you think about that case of Dr. H.? Or if you know the physician, say he is competent to attend to his own business; if you don't know him, change the subject. But at all events, unless he be a notorious quack, refrain from uttering any words which even only insinuate the possibility of a mistake or want of skill of your colleague.

Stop running each other down; stand by each other; sustain each other, "stick together and be clannish;" let it be understood in public that no reputable physician will prostitute himself by going to court as expert for a blackmailer. If all the reputable physicians of this city adopt and act on this principle, blackmailing the medical profession would soon be a thing of the past, and malpractice suits more effectually prevented than by the organization of a protective union.

PROFESSOR P. S. HAYES said that from his costly experience in a malpractice suit he felt that an association such as sug-

gested by DR. DOERING would be of great service. The lawyer employed by such an association would speedily acquire such a fund of medical knowledge that he would be considered an expert in malpractice cases. He would not require an amount of coaching necessary to prepare for any given case, as would be requisite in the case of a lawyer who had had no experience in such cases. His opportunity for obtaining information in a given case would be largely extended, for each member of the association to whom he might apply would be interested in giving him the desired knowledge. He would soon become acquainted with medical witnesses and know which would give the best testimony in any case.

An association of the character suggested by the paper might be a means of educating its members in regard to laws bearing on the rights of physicians and their patients, now not generally understood.

For one he is heartily in favor of such an association, and should give it his hearty support.

PROFESSOR G. C. PAOLI said DR. DOERING'S paper is not only a valuable one, but contains such a high, noble, charitable feeling, that the Society ought to be grateful to him. He wondered that such steps had not been taken before, because so many of our professional brethren have not only suffered annoyance, but pecuniary loss as well. How can we expect from an ignorant jury a decision based on scientific knowledge and justice?

DR. F. M. WELLER said that the subject of the paper was worthy of consideration; that the discusion of the formation of an association with an object so widely different from the Medical Society seemed out of place; the one essentially

scientific, the other in the nature of an insurance. The right to form such an organization was unquestioned; the policy should be considered by each individual. That while any one might be made the object of blackmail, he believed that charges of malpractice more frequently arose from the ignorance of physicians of the statutes affecting the practice of medicine, especially those of the criminal code, and of the rulings of the courts in cases.

DR. H. D. VALIN read a paper on

THE ORIGIN AND SIGNIFICANCE OF THE SEXES AND THE DETERMINATION OF SEX IN UTERO.

He said that it is not generally known that intermediate steps exist by which sexual generation evolved from a primitive mode of conjugation of two or more similar organisms. The process of conjugation observed in the slime molds resembles a sexual process of extreme simplicity. But this union seems to take place between undifferentiated individuals, and as no sexual organ or secretion is present, it could not be called sexual, and it is only a step higher than that observed by Ch. Robin in the noctiluca, individuals of which sometimes swallow others of their own species as they would a particle of food.

The evolution of the sexes is epitomized in the three following species of the volvox family: *Pandorina morum*, *Volvox globator*, and *Volvox aurens*. In the first the spermatozoids are not differentiated from the granules of the ovum, in the second they are so differentiated, and in the third the two sexes exist each in a different colony.

In the animal kingdom, some species of mollusks contain an organ (ovo-testis) from which spermatozoids as well as ova are produced. In many animal species both sexes are contained

in one individual, as in the case of tape-worm, leeches, earth-worms, barnacles, oysters, some star-fishes; and among the vertebrates such is the case in several species of serranus, as well as in other fishes. However, most of the vertebrated animals have the sexual organs distinct in two different individuals, but a condition closely resembling hermaphroditism often occurs by reversion as an anomaly; and should any one disbelieve that some remote progenitor of the whole vertebrate kingdom has been hermaphrodite, there remain the facts "that at a very early embryonic period both sexes possess true male and female glands" (Darwin), and in each mature individual rudiments of some of the sexual organs of the opposite sex are extant.

The condition of hermaphrodite is advantageous enough as long as the struggle for existence is but slightly marked, but in higher life, where the least advantage is of moment hermaphroditism gives rise to separate sexes in the following manner: those hermaphrodites whose spermatozoids and ova mingle with the generative products of other hermaphrodites breed a progeny which is more vigorous than that resulting from a single hermaphrodite, and thus copulation between hermaphrodites became established in the struggle for existence; but this is an observed fact, for Darwin said: "There is reason to believe that with all hermaphrodites two individuals, either occasionally or habitually, concur for the reproduction of their kind."

Of course that set of organs in one individual hermaphrodite which had been used more frequently would the better perform their function, while the opposite set would become less active; and then we would find some hermaphrodites with better developed male organs; and others with better developed female organs; and the progeny resulting from the union of two

such more differentiated individuals would be especially favored in their struggle for life and would breed individuals in which one set of organs would be abortive, while the other would be highly developed, as is the case in as high an animal as man. Such a transitory stage as alluded to above is met in mollusks, and in the common oyster; the genital cœca in any given individual are found to be either almost all ovigerous or almost all spermigerous (Huxley).

In the case of hermaphroditic human persons the organs of one sex almost always predominate over those of the other.

The foregoing facts and inferences warrant me in formulating the following hypothesis, which will explain the law of heredity: In hermaphrodites, while the organs of one sex become more highly evolved, at the expense, as it were, of the opposite sex's organs, this latter set, as embryology proves, is slow to disappear, and concentrates itself in the germinal matter. In other words, as the male organs become better developed, the spermatozoids acquire a faculty for developing a female offspring, and vice versa. This hypothesis is based chiefly on the facts that the queen bee (Huxley) contains a male germ in each of her unimpregnated ova, while the male bee transforms, by means of his spermatozoids, the same ova into females.

Determination of Sex in Utero.—In case each sex generally reproduces the opposite, as I claim, it is easy to understand why the number of each remains about stationary under ordinary circumstances. The law of Thury, of Switzerland, that "conception following menstruation produces females, and conception preceding menstruation produces males, harmonizes with my hypothesis if we consider that a greater number of spermatozoids and more active ova will reach the ovum in the uterus than would in the Fallopian tubes and in the ovaries, and should any given cause act to reduce one sex, the

other sex would thrive the better and would reproduce a majority of the rarer sex, thus restoring the equilibrium, and insuring an equal number of either sex in the progeny.

There being no discussion on this paper, the society then adjourned.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY.

LXII Meeting, Friday, January 15th, 1886.

I.—EARLE. *The Watery Discharges of Pregnant Women.*

II.—DOERING. *Report of a Case of Hydatiform Pregnancy.*

III.—WAXHAM. *Intubation of the Larynx, with History of Cases.* (*Inaugural Thesis.*)

The PRESIDENT, PROFESSOR DANIEL T. NELSON, M. D., in the chair.

I.—PROFESSOR CHARLES WARRINGTON EARLE read a paper entitled,

"THE WATERY DISCHARGES OF PREGNANT WOMEN."

Mrs. F. K. consulted me for a profuse watery discharge which had taken place several times during her pregnancy, commencing at the third month. She was the mother of three children, and had always been free from any marked pelvic disease. The first discharge was clear and watery, and she estimates the quantity at about two quarts. This came away in a gush, most of it being discharged at once, although there was a slight loss for some days thereafter. At first it was thin and clear, then slightly thicker, of the color of weak coffee. These discharges seemed to occur every two or three weeks, and were frequently attended with considerable pain. There was a decided diminution in the size of her abdomen after each discharge.

On October 30th, I found her in great pain, and an examin-

ation demonstrated that the fœtus was very low in the pelvis and apparently not surrounded with any *liquor amnii*. The *os uteri* was neither soft nor dilated. She was ordered anodynes and to remain in bed. On the 7th of November, I again saw her, and found she had been having more or less pains since my previous visit. There was no dilation. Two days after, however, she was delivered, her gestation having lasted about 200 days. The child lived about one hour. She made a good recovery and resumed her place in her family in the course of two weeks.

Mrs. M., 27 years old; in her ninth pregnancy. At the end of five months she commenced to have a flow of fluid which continued until the end of the seventh month, when she gave birth to twins, one living and the other dead. There was no escape of *liquor amnii* at her confinement. The same lady in her eleventh pregnancy commenced to lose fluid at the end of the seventh month, which continued until the completion of the full term, when she gave birth to a healthy child. She had what her attendants called a dry labour.

Mrs. D. W. R., aged 31, the mother of nine children, has been pregnant since the 1st of July, 1885. On November 20th, she said to a friend who was at her bedside that she was flowing and asked to be supplied with a napkin. A sheet folded and placed under the patient was thoroughly saturated with fluid; the discharge being equal probably to at least two pints. She had severe pains, which simulated those of labour, lasting a few hours. On December 15th, she had a similar discharge. The future of this case is yet to be decided.

Frequency.—These cases evidently take place with more frequency than we have, up to this time, supposed; but the older obstetric authors have noticed peculiarities of this kind, and given very fair descriptions of the complication.

SMELLIE says (page 179, Vol. II.): "Dribbling of fluid may go on for weeks, but a sudden gush is invariably followed by parturition; the longest interval between a sudden gush and labour being seven days." In this he is certainly mistaken, as the history of many recorded cases and some of mine will demonstrate.

DENMAN, 1815, says: "Instances have been recorded in which the waters of the ovum are said to have been voided as early as the sixth month of pregnancy without prejudice either to the child or the mother. The truth of these reports seems to be doubtful, because where the membranes are intentionally broken, the action of the uterus never fails to come on. A few cases of this kind, somewhat similar, have occurred to me. A discharge of colorless fluid takes place, daily, from the vagina for several months preceding labour, which is due to the rupture of some lymphatic. Such labours are usually premature and the fœtus small."

The same authority also cites a case where, after the delivery of the placenta, several pints of lymph were discharged.

BURNS, 1822, page 238, says that the discharges of watery fluid from the vagina are not infrequent, and generally depend upon the secretion of glands about the cervix; the rupture of lymphatics, or from fluid collected between the chorion and amnion, or water from blighted ovum in the case of twins.

DR. PENTLAND relates a case where coughing produced a discharge, the water being discharged at the fourth month; but labour only occured at full term.

MERRIMAN, in his work entitled "Difficult Parturition," 1826, relates the case of a lady—six months pregnant—from whom a profuse, watery discharge occurred. She summoned a physician, who assured her that if pains came on she would

soon be delivered, She continued, however, to the end of pregnancy, having a profuse discharge each day. At full term she was delivered, her attending physician rupturing a bag of waters, which appeared in no way different from usual cases. No opening was discoverable in either the placenta or the membranes, and he concluded that the discharge must have come from the outside of the membranes.

CHAILLY, edited by BEDFORD, 1844, gives a rather full account of hydrorrhœa, the description not being different from those I have already related. He says, however, that these discharges are more frequent than are generally supposed, but makes the erroneous statement that in nearly all these cases pregnancy is carried along to its full term.

Nearly all modern authors devote a short section to the consideration of this subject, giving different names, as their ideas of its origin and pathology are different.

Three separate pathological conditions seem to be, in many cases, confounded, and I see no way by which a differentiation can be made.

1st. A discharge of the *liquor amnii.*

2d. Discharges from increased glandular action.

3d. A possible collection of fluid between or outside of the membranes, and its irregular evacuation.

In my teachings I have been in the habit of speaking of hydrorrhœa, but never, up to a few months ago, had I seen a marked case. A study of this case with others collected from my own experience, and the perusal of the article written by DR. THOMAS C. SMITH, of Washington, D. C., which appeared in the *American Journal of Obstetrics* in May, has caused me to go over the subject carefully and to present what I can obtain from the authorities in regard to these peculiar discharges.

Great numbers of cases have been recorded, but no one, up to this time, has demonstrated conclusively the source of the flow.

The etiology of these discharges has been the subject of very different opinions by different obstetric authors. CHAILLY says that authors have attempted to show that these discharges are due to the accumulation of fluid between chorion and amnion; to rupture of lymphatic vessels; to transudation through amniotic membranes; to rupture of the membranes at some remote point from the orifice of the uterus, and finally, to dropsy of the womb.

LUSK says the pathological processes involved in the disease are vascularity, hyperæmia and hypertrophy of the interstitial connective-tissue, and of the glandular elements of the decidua.

BARNES, in the "System of Obstetric Medicine and Surgery," 1885, says in regard to these discharges, without entering into a critical discussion of the several theories, that it seems to be well established that there are five sources rom which this fluid may come:

1st. A discharge from the cervical canal.

2d. The decidual origin.

3d. Transudation through the amniotic membranes.

4th. Hydatidiform degeneration of the ovum.

5th. Cauliflower excrescences.

The *Differential Diagnosis* must rest between the following similar discharges:

I. From the discharge from hypertrophied cervical glands.

II. Fluid collecting between chorion and amnion, occurring only once.

III. Escape of fluid from amniotic cavity.

I. The fluid escaping from the hypertrophied glands must be small in quantity, and we would expect that it would continue for a considerable length of time. There would be no diminution in the amount of *liquor amnii* and the child would be found floating in the usual amount of fluid.

II. If the fluid collected between any of the membranes, and adhesive inflammation surrounding it followed, a considerable amount of fluid might collect, and the discharges would be considerable at once, and might or might not be repeated. In such a case there would be no evidence of escape of true amniotic fluid, although there might be a lessened size of the abdomen.

III. Where the *liquor amnii* escapes there would be a greater tendency to uterine contractions; a more perceptible diminution in the size of uterine tumor, and a microscopical or chemical examination would certainly reveal some evidence of urine, as we know this exists in variable quantities in the *liquor amnii*.

Transudation through the amniotic membrane, although recently noticed by BARNES, and mentioned by older authors, would give rise to the discharge of a very small amount of fluid.

This could hardly be differentiated from a slight discharge taking place from the cervical glands. Fluids discharged from hydatidiform degeneration of the chorion or from cauliflower excrescence, would be so associated with the diseases which cause them that the diagnosis would not be difficult.

Prognosis.—As far as my observation goes, the life of the woman is not jeopardized, but she suffers from the constant discharge and becomes anæmic. The pain is sometimes severe, as I have before remarked, and the patient is full of gloomy forebodings and anxious in regard to the final result.

The fœtus is usually born prematurely, and, in many cases, only lives a short time.

The treatment must necessarily be very simple—rest and anodynes being about all that can be suggested.

DISCUSSION.

DR. H. P. MERRIMAN: MR. PRESIDENT, I had one case of this kind about a year ago. The woman had a sudden gush of water when she was not quite five months pregnant. I thought it might presage labour, and told her to let me know of any symptoms of labour,—that I expected it would come on. But she felt better after having had the gush of water. She had, in the course of two or three weeks, another, and said she could tell when they were coming on, because she felt so full before they came. When the second came I began to think that perhaps she was not going to have labour at the present time after all; that it probably was not a loss of the amniotic fluid, and I examined her and found the os not dilated. I could feel, however, by carefully introducing my finger, that there was water still remaining there,—the amniotic bag remaining apparently intact. I gave her opiates, thinking that labour might possibly be prevented. She went along for nearly a month after that, before she finally miscarried. She had three separate gushes of water at intervals of two or three weeks before her miscarriage finally came on. The fœtus had perhaps a little over six months of intra-uterine life at the time of its expulsion.

It strikes me that we might learn by careful examination of the placenta and membranes after delivery, a great deal more than we have yet learned about this subject. I cannot help thinking that there must be some defect in the fœtal envelopes to have a thing like this occur. It could not have been a rupture of the amnion, but there may have been a separation

between the amnion and the chorion, as I have seen in one other case in my own practice, in which the infant or fœtus enveloped in the amnion came away, leaving the chorion within the uterine cavity. And we had a similar case presented to the Society a year ago, by Doctor SAWYER. The amnion had been separated from the chorion, and came away intact by an effusion of liquid between the chorion and amnion. Now, if that takes place, why of course there may be a separation in part and then adhesion again after the occurrence of the rupture. Any gush of this kind indicates, to me at least, some disturbance of the fœtal envelopes, either of the chorion or amnion, or a cystic degeneration of the placenta; and it strikes me that in every case of this kind the placenta and membranes ought to be carefully observed after the delivery, to see what pathological cause brought on the abortion.

I would like to state, in addition to my case, that the woman finally had her miscarriage quite suddenly. I was not present, and another physician was called.

THE CHAIRMAN: I would like to ask a question as to whether there is any specific cause operative in the production of these cases? Whether syphilitic or gonorrhœal infection may have anything to do with it, and also whether inflammation of the mucous membrane of the uterus precedes these causes? Is it, in other words, an acute or chronic inflammation of the mucous membrane that causes it?

DR. HENRY T. BYFORD: I have nothing to add, except that Dr. C. R. PARKE, of Illinois, reported a case to me, in which the discharge of the *liquor amnii* took place, labour pains came on, and the umbilical cord became prolapsed. He replaced the cord and gave ergot. As labour did not progress, he finally gave morphia and quieted the pains. In three months the woman was delivered of a living child; mother and child did well.

DR. H. P. NEWMAN: I saw a single case; the discharge however, was greater than in the cases related, and came on about six weeks previous to the abortion; the membranes were not examined.

PROFESSOR W. W. JAGGARD said that he had listened to the reading of Dr. EARLE's paper and the discussion with great interest. He could not, however, agree with the author of the paper in considering the pathology of *hydrorrhœa uteri gravidi* as obscure and confused in all its details. CARL BRAUN (*Zeitschr. d. Ges. d. Wiener Aerzte, 1858, No. 17, p. 257*) and C. HENNIG (*Der Katarrh der inneren weiblichen Geschlechtstheile, Leipz., 1862, p. 48*) had clearly and distinctly described the pathological anatomy of the condition. Chronic decidual endometritis may terminate in the formation of new connective tissue, or may manifest itself by the production of a yellow, sero-albuminous fluid, variable in quantity, which accumulates between *decidua vera* and *reflexa*, or when *vera* and *reflexa* are united, between decidua and chorion. CARL BRAUN accordingly considers the condition to be a *serous endometritis*. HENNIG aptly terms it *catarrhal decidual endometritis*. Catarrhal decidual endometritis must be distinguished from collections of fluid between the amnion and chorion, the so-called amnio-chorial water. BISCHOFF has designated the unorganized, albuminous fluid uniting chorion and amnion as the *tunica media*. The quantity of this fluid may increase abnormally, at the same time that its consistency is diminished. MCCLINTOCK describes a case, referred to by SPIEGELBERG, in which the amount of "amnio-chorial water" was so great as to simulate hydramnios. The "amnio-chorial water" may be discharged without the interruption of pregnancy, but then the discharge of fluid is not repeated as in the intermittent

discharges of *hydrorrhœa uteri gravidi.* Labour always follows the rupture of the amniotic sac,—a fact which establishes the possibility of a differential diagnosis in the large majority of cases. It is unusual for labour to be prematurely induced by the discharge of the "amnio-chorial water," or collections of catarrhal secretions between chorion and decidua.

A condition strictly analogous to *hydrorrhœa uteri gravidi* is frequently observed in uterine fibroids. The intermittent discharge of a yellowish sero-albuminous fluid from the uterine cavity is a symptom of such frequent occurrence in this condition that attention is directed to it by most systematic writers.

With reference to the ætiology of *hydrorrhœa uteri gravidi*, there were several facts of practical import. Any antecedent endometritis,—gonorrhœal, syphilitic or of other origin,—is an adequate ætiological factor. Hydræmia appears to favor the development of the condition. The coincidence of hydræmia with catarrhal decidual endometritis would certainly indicate the exhibition of chalybeate tonics in the treatment of the latter affection.

He fully agreed with Dr. MERRIMAN in attaching great importance to the critical examination of the fœtal envelopes in order to clear up a doubtful diagnosis.

DR. EDWARD WARREN SAWYER called attention to the fact that watery discharges from the uterine cavity frequently occurred during the *puerperium.*

He thought that the condition, technically termed *hydrorrhœa gravidarum*, was due in all cases to the transudation of the amniotic fluid. This was the opinion ably advocated by CHARPENTIER.

PROFESSOR W. W. JAGGARD thought Dr. SAWYER had not quoted CHARPENTIER correctly. CHARPENTIER mentions STAPFER's recent monograph (*Thèse de concours*, 1880), in flattering terms; enumerates the various hypotheses proposed by a large number of observers, and says the German theory, already referred to, is the most probable.

PROFESSOR CHARLES WARRINGTON EARLE :

I have but very little to say, Mr. Chairman, in closing the discussion. It seems to me, however, that there is one thing, at least, that we should learn from our consideration of this subject this evening. It seems to be impossible for any one to determine the exact source from which a considerable amount of fluid is occasionally discharged from the vagina of a pregnant woman. We do not know whether this fluid comes from the amniotic cavity or external to it ; therefore, we should not give ergot or commence the dilatation of the *os uteri* after a watery discharge, believing that labour must come on, because from the testimony we have received here to-night, and from other evidence, it does seem that even if the *liquor amnii* is prematurely evacuated in a few cases, pregnancy may go on to full term.

My attention has been called to the phenomenon mentioned by Dr. SAWYER, and if I had not desired to make my paper as brief as possible, I should have spoken of the watery discharges which occasionally take place after labour. I have never seen a case, but it is mentioned in the literature, and it is believed by those who have written upon the subject that the fluid in these cases comes from either the large lymphatic vessels, or perhaps from a continuation of the same disease which produced the discharge before.

The Doctor is certainly not quite in accord with the majority of authorities when he says that the discharges of pregnancy always come from the cavity of the amnion.

DR. EDWARD WARREN SAWYER:

No; but the term "hydrorrhœa" should be reserved for that class of cases.

PROFESSOR EARLE:

This is not hydrorrhœa, as I understand it. This term should be applied to a discharge of fluid from outside of the amniotic membrane; perhaps not from outside of the chorion, but certainly from outside of the amnion.

II.—DR. E. J. DOERING read a paper entitled:

REPORT OF A CASE OF HYDATIFORM PREGNANCY.

After a brief discussion of the ætiology and pathology of cystic degeneration of the chorionic villi, Doctor DOERING related the history of the following case:

Mrs. W. D. P., a cultured lady, of slender physique, twenty-one years of age, was attended by me in labour fifteen months ago, and delivered by instruments of a healthy boy weighing ten pounds. Her general health has been good. She has had no miscarriages either previous to or since the birth of her child. Her last period occurred during the latter part of October, 1885. During the month of November the catamenia remained absent, which she attributed to a cold, the idea of pregnancy not occurring to her, as she had none of the usual symptoms. During the month of December, and particularly during the week preceding the holidays, she was on her feet constantly, although not feeling well, having sensations of chilliness, followed by a feeling of heat and general depression. On the Sunday before Christmas a slight and painless flow of blood commenced, believed by her to be the period, now four

weeks overdue. The flow continued several hours and then ceased. On Christmas day, while seated at the dinner-table, she was suddenly attacked with a profuse hæmorrhage, the blood saturating the floor, and continuing until a degree of faintness was produced, in which condition I found her on my arrival a few minutes afterwards. The hæmorrhage, which had been entirely without pain, ceased suddenly. A careful examination confirmed my suspicion of pregnancy, although I was much surprised at the size of the uterus, corresponding to a four and one-half months' pregnancy, the fundus rising nearly midway between the symphysis pubis and the umbilicus. There being no further hæmorrhage, no pain and no dilatation of the os, an expectant plan of treatment was pursued by instructing the patient to keep in bed, enjoining absolute rest, and giving her a few doses of morphia. On the following night another hæmorrhage occurred, but of not much consequence, and requiring no interference. Two days later, on the morning of the 28th of December, another hæmorrhage took place, more copious than the last one, but still unaccompanied with pain. An examination showed slight dilatation of the os, but not sufficient to permit the recognition of the contents of the uterus. As the patient was beginning to show decided symptoms of anæmia, the vagina was tamponed and ergot administered to check the hæmorrhage and favor uterine contractions.

Uterine pains soon commenced, accompanied by considerable hæmorrhage; the os dilated fully one inch, the presenting part giving the sensation to the finger of a blood-clot. This was soon expelled in detached portions, and on removal from the vagina was readily recognized as a hydatiform mole, having all the characteristic appearance of a grape bunch, composed of a mass of translucent vesicles, about the size of

currants, containing a clear, limpid fluid. After inserting two fingers into the uterus and emptying it as thoroughly as possible of all the diseased tissue, the hæmorrhage promptly stopped. The entire mass removed equaled about the size of a large orange. Some febrile reaction occurred, but for several days the temperature did not exceed 100½F°. and the pulse 95, the treatment consisting of quinine and ergot, internally, and the use of uterine and vaginal injections of carbolized water.

On the beginning of the fourth day the patient was suddenly seized with a severe chill, followed by the usual symptoms of septic poisoning, high temperature (104½°F.), rapid and feeble pulse, superficial respiration, great tympanites, thirst, vomiting, and arrested lochia, with no pain or tenderness over the abdomen. The outlook was anything but promising, but the prompt administration of large doses of quinine, combined with diaphoretics, turpentine stupes, warm fomentations, and the continued use of antiseptic injections was followed by the most gratifying results, and after four days of great anxiety the patient had recovered sufficiently to be declared out of danger. At the present time, eighteen days since the expulsion of the mole, the patient is up and about the house, with a good appetite, and making preparations to leave in a week or two on a journey to the south.

DISCUSSION.

PROFESSOR CHARLES WARRINGTON EARLE: I have seen two cases of this kind, and while I have been surprised a great many times in my practice, I was never more so than upon one of these occasions. I had been in practice about two years, when I was called to attend a lady in confinement near my residence. I placed myself at her bedside, found the *os uteri* well dilated, with the membranes intact and well down

in the vagina, when all at once there came a gush of something, and a large quantity of these grape-like bodies made their appearance. I immediately gave ergot and cleared out the uterine cavity, and took the first opportunity to repair to my study to seek an explanation of this, at that time, to me a strange phenomenon. The case was eventually made the subject of a little article which appeared about that time in the *Chicago Medical Examiner*.

The lady was anæmic, and made a slow but perfect recovery. She has enjoyed good health since, but has never again become pregnant.

DR. HENRY T. BYFORD: I had an opportunity to see this specimen, and it was very much like a bunch of grapes in shape, although BARNES, I believe, claims there is no such resemblance. But he bases his views upon the fact that the vesicles are developed from each other instead of from the common stem.

In regard to the treatment, I think it would now be considered best to scoop out the uterus to prevent septicæmia, and so it would be, if that could be easily done. From inquiry of Doctor DOERING, I understand the opening in the cervix was rather small, the body anteverted, and it would have been necessary to use an instrument in removing the mole. I have seen severe inflammation in the broad ligaments result from curetting the uterus after abortions, with the dull curette. Therefore, I think it is a point of interest well illustrated in this case, that it is not in every instance the proper thing to do; especially when so much has been passed that there is pretty firm tonic contraction of the uterus.

DR. H. P. NEWMAN: I understood DR. DOERING to say he used ergot. This might explain the fact of finding the cervix closed.

DR. DOERING: I would like to ask DR. EARLE whether he discovered any trace of the fœtus.

PROFESSOR EARLE: I did not in my case, but there is a specimen in the museum of the College of Physicians and Surgeons in which the fœtus is one and one-half inches long.

DR. CHARLES CALDWELL: I met with one case in my practice last fall. October 10th, I was called early in the morning, the messenger informing me his wife was having a miscarriage. I found my patient flowing quite profusely. She supposed herself five months pregnant, as she had not menstruated since May.

The last week in July, she flowed slightly for two days. The 12th of August, the flow commenced again, and was so profuse that she went to bed and called a physician, who diagnosed her case threatened abortion, and treated her accordingly, keeping her in bed two weeks. From that time until the hydatidiform mole was expelled the flow never stopped completely, for a single day, but she passed no pieces of the mole. The os was soft and easily dilated. I introduced two fingers into the uterine cavity and removed its entire contents. The mass was too large to be removed intact, and the ós was not sufficiently dilated. As I removed each piece the uterus contracted well and firmly, diminishing the size of its cavity rapidly, so I was sure when it was empty.

The lochial discharge kept up for three days. She remained in bed one day, but the next morning prepared her husband's breakfast, and has attended to her household duties since. There were no symptoms of septicæmia following. The broken mass would have filled a two quart measure. Some of the cysts were as large as a bean. I gave

PROFESSOR JAGGARD a specimen to show his class. No fœtus could be found in the mass. Small doses of ergot were given for a few days. Menstruation was established in December, and the patient is now strong and healthy.

III.—The inaugural thesis of PROFESSOR F. E. WAXHAM, M. D. (Chicago Medical College, 1878), entitled:

"INTUBATION OF THE LARYNX, WITH HISTORY OF CASES," was read by the SECRETARY, EDWARD WARREN SAWYER, M. D.

PROFESSOR WAXHAM described DR. O'DWYER's method of intubation of the larynx, narrated the histories of seventeen cases, in which the method had been employed, and drew the following conclusions:

"Intubation of the larynx possesses many advantages over tracheotomy:

"1. No opposition is met with on the part of parents and friends; quite a contrast to the difficulty which we usually meet in obtaining the consent to tracheotomy.

"2. It relieves the urgent dyspnœa as promptly and as effectually as tracheotomy, and if the child dies there is no regret that the operation was performed, and no discredit is attached to the physician.

"3. There is less irritation from the laryngeal tube than from the tracheal canula. As the tube is considerably smaller than the trachea, it does not press upon it firmly at any portion excepting at the chink of the glottis.

"4. Expectoration occurs more readily than through the tracheal tube.

"5. As the tube terminates in the throat, the air that enters the lungs is warm and moist from its course through the upper air passages, and there is less danger of pneumonia.

"6. It is a bloodless operation.

"7. It is more quickly performed and with less danger.

"8. There is no open wound that may be the source of constitutional infection.

"9. Convalescence is more rapid, as there is no ghastly wound to heal by slow granulations.

"10. The patient does not require the unremitting care of the physician, as in tracheotomy.

"11. I believe it to be a more successful method of treating croup, either diphtheritic or membranous, than tracheotomy.

"The only objection to the operation of intubation is the difficulty of its performance."

DISCUSSION.

PROFESSOR CHRISTIAN FENGER: MR. PRESIDENT, this is a subject of exceeding interest and deserves great attention. Tracheotomy is one of the few operations that always make me nervous. That this operation is attended with some danger there is no question. There is danger from hæmorrhage during and after the operation, and there is some danger of shock, which in cases where there is no membranous laryngitis, sometimes can be traced only to the operation. For instance, I years ago went to make an examination of an old man who had swallowed a little fish bone, that had got into the mucous membrane in the entrance to the larynx, during dinner. Œdema of the glottis necessitated tracheotomy, which was performed without an anæsthetic. There was no hæmorrhage, the dyspnœa was relieved, but the man died about twenty-four hours afterwards from the shock or disturbance attributable only and alone to the operation. In other cases hæmorrhage, even under great care in the operation, cannot always be avoided. I

have had two cases of such hæmorrhage where the patients have died, one in two hours and another in five hours subsequent to the operation, not on account of the amount of hæmorrhage, but on account of the disturbance in the lungs, caused by a moderate amount of aspirated blood. So if it is possible to get around the tracheotomy in some other way, then I for one would embrace it with the greatest of pleasure. However, when I saw PROFESSOR WAXHAM'S intubation—which I looked forward to with great interest—I got afraid of the tubes slipping into the air passages so I could not get hold of them again. That is one thing, and another that came into my mind was the small caliber of the opening in the tubes. I had an opportunity to see a little child that he operated upon where the operation was easy, and relief was instant, and that is all that I have seen as yet of the matter. Then, of course, I read the paper. There is one thing that I would be rather afraid of,—but that is a theoretical objection only,—that is, to leave the child without taking the tube out. It seems from the cases reported, however, that in those cases there has never been much trouble of this kind, and theory of any kind is of no value whatever compared with facts.

I believe that this matter is very worthy of careful consideration; but, on the other hand, not until a larger number of cases have been tried will we be able to form any definite opinion about it. But we know enough from the cases recorded here to be desirous of having this new matter tried.

PROFESSOR F. E. WAXHAM, M. D., was then elected Fellow of the Society.

W. W. JAGGARD, M. D., *Editor.*

22d February, 1886.

2330 Indiana Avenue.

BOOK REVIEWS.

FACTS AND MYSTERIES OF SPIRITISM. *By* JOSEPH HARTMAN. *12 mo, cloth, pp. 378. Philadelphia:* T. W. HARTLEY & CO. *Chicago:* JANSEN, MCCLURG & CO. 1885.

The verdict of common sense would naturally send the author to an insane asylum; but in that light, Swedenborg, and even St. John, would have been considered insane, as far as their hallucinations or visions are concerned. If Mr. Hartman is insane, we must confess that he is a most intelligent lunatic.

This book is a graphic account of the obsession of the author by evil spirits for a space of time extending over seven years. The terrible effects of these hallucinations could not have been better described by any one than by the sufferer himself. The book will furnish valuable material for the study of insanity, inasmuch as it contains eleven cases of obsession besides that of the author. That such cases are often sent to insane asylums is not surprising, as that is about as good a place as any in which they could be properly taken care of; yet, from the frequency of milder forms of hallucination, in people of perfectly sound mind, a greater discrimination ought to be exercised in the examination of the insane than is done nowadays. This duty ought to be intrusted to physicians possessed of more than plain common sense. This book is well written, and nicely

printed. Its theories will play havoc in the spiritualists' camp, for the author, from his familiarity with evil spirits, has ceased to believe that good spirits can manifest themselves to the living. It is to be hoped that the majority of readers are proof against the contagiousness of such hallucinations, which would carry us back to the dark ages when our ancestors walked on four. But Mr. Hartman deserves our sympathy for his peculiar belief, for, hallucinations being mostly reversals to ancestral ideas, and our ancestors having sprung from the quadruped family, one would naturally expect that the revelations of spiritualism would turn out to be nothing but the remembrances of beastly memories.

H. D. V.

ITEMS.

Minister's wife (looking over the paper): "You are referred to in this morning's paper, my dear, as a distinguished clergyman."

Minister: "H'm! I thought that my sermon yesterday would attract attention. Is it published in full, or only a synopsis given?"

Wife: "Neither; you are spoken of as a 'distinguished clergyman' in connection with that patent medicine testimonial you sent Dr. Quack."